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IN THE

Supreme Court of The United States

October Term, 1966

No. 777

DUKE POWER COMPANY,

Petitioner,

v.

UNITED STATES OF AMERICA,

Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

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Supreme Court of The United States

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No. _____

DUKE POWER COMPANY, *Petitioner*

v.

UNITED STATES OF AMERICA, *Respondent.*

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

Petitioner prays that a writ of certiorari issue to review the opinion of the United States Court of Appeals for the Fourth Circuit announced and filed in the above-entitled cause on September 21, 1966.

OPINIONS BELOW

The opinion of the United States Court of Appeals for the Fourth Circuit, announced on September 21, 1966, printed in Appendix A, has not yet been reported.[1] The opinion of the

[1]The Circuit Court opinion is a joint opinion with the case of *United States v.* 531.13 *Acres of Land in Oconee County, South Carolina, J. P. Stevens & Company, Inc., et al.* Until the Circuit Court decided the cases without reference to the question whether the Seneca River was a part of the navigable waters of the United States, the cases were tied together by the issue of the navigability of the Seneca River, common to both. By stipulation, testimony as to navigability applied in each case; and, with the approval of the Circuit Court, they were briefed and argued together.

District Court, printed in Appendix B, is reported in 243 F. Supp. 981. The Report of the Commission is printed in Appendix C.

JURISDICTION

The opinion of the United States Court of Appeals for the Fourth Circuit was announced and filed on September 21, 1966. Jurisdiction of this Court is invoked under Title 28 of the United States Code, § 1254.

QUESTION PRESENTED

Whether the power of the United States to regulate interstate commerce includes the power to inundate and destroy with a Government project, without payment of compensation to the owner, a long-existing, privately owned hydroelectric plant where the inundated hydroelectric property was not on a navigable water of the United States and where its operation did not affect a navigable stream of the United States?

CONSTITUTIONAL PROVISION INVOLVED

The commerce clause, Article I, Sec. 8 (3) of the Constitution of the United States.

STATEMENT

The reservoir impounded by respondent's Hartwell Dam in the Savannah River inundated petitioner's Portman Shoals Dam, reservoir, and powerhouse in the Seneca River, a nonnavigable tributary of the Savannah, according to the undisturbed finding of the District Court. Petitioner's hydroelectric facility was in full operation as a part of petitioner's electric utility business until its inundation became imminent in December 1960. Respondent's Hartwell Dam was on the navigable Savannah five miles below the mouth of the Seneca. Petitioner's Portman Shoals Dam, constructed in 1896-1898, under general authority from the South Carolina Legislature, was located eight miles up the Seneca from the Savannah.

This eminent domain proceeding was instituted by respondent on October 21, 1960. The basis for Federal jurisdic-

tion is 28 U.S.C., Section 1358. By amended complaint, filed October 5, 1962, respondent asked that if the Seneca was found navigable, just compensation be awarded only for petitioner's land which was not subject to respondent's navigational servitude, but that if the Seneca was determined to be nonnavigable, just compensation be awarded to petitioner for the land in the bed of the stream.

A commission was appointed under F.R.C.P. 71A(h) to hear this and other cases. It found the Seneca nonnavigable and that petitioner's hydroelectric facility did not affect the navigable capacity of the Savannah. It determined that petitioner was entitled to $37,500 for its lands outside the bed of the Seneca and $500,000 for its hydroelectric facilities less $9,627 as salvage value for the part of the machinery removed prior to inundation.

The District Court reached the same conclusions as the commission on independent findings and also approved the commission's report. It awarded judgment for petitioner in the same amounts determined by the commission.

The court below reversed the District Court, stating that it was not necessary that it reach the question of the navigability of the Seneca. It held that petitioner was not entitled to compensation for its hydroelectric facilities as the Seneca, as a nonnavigable tributary of the navigable Savannah, was subject to the control of the United States in the exercise of its power over interstate commerce. The judgment of the District Court with respect to the lands outside the bed of the Seneca was not questioned by respondent in its appeal to the United States Court of Appeals for the Fourth Circuit.

REASONS FOR GRANTING THE WRIT

1. The decision of the United States Court of Appeals for the Fourth Circuit in the instant case is directly in conflict with the decision of this Court in *U.S. v. Cress*, 243 U.S. 316 (1917). The conflict is candidly acknowledged by the Circuit Court in its opinion by Judge Bryan who says:

"Undebatably, *United States v. Cress*, 243 U.S. 316

(1917), in the Kelly appeal No. 718, relied upon by Duke is a holding contrary to our conclusion here."

The announced basis for refusing to follow the holding in *Cress* was declared by Judge Bryan to be that *Cress* had been "so severely pared as a precedent on the present point that we do not feel justified in allowing it to prevail here."

The Court of the Fourth Circuit relied on *U.S. v. Willow River Power Company*, 324 U.S. 499 (1945), as having "straitened" the scope of *Cress* and *U.S. v. Grand River Dam Authority*, 363 U.S. 229 (1960), as having "refuted and rebuked" *Cress*.

The Circuit Court proceeded on an erroneous understanding of *Willow River* and *Grand River Dam Authority*. Neither case purported to overrule *Cress*. Neither has been treated by this Court as overruling *Cress*. Following *Grand River Dam Authority*, and in the latest pronouncement by the Court in this field, *Cress* was cited as authority. *U.S. v. Virginia Electric and Power Co.*, 365 U.S. 624 (1961).

In *Willow River* this Court expressly refused to overrule *Cress* though urged to do so by the Government. The *Willow River* opinion stated that *Cress* did not govern *Willow River* because in *Cress* the Government was charged with changing the level of a nonnavigable stream while in *Willow River* it was charged with the consequences of changing the level of a navigable stream. Although *Willow River* refused to extend the doctrine in the Cress case, this Court did not overrule *Cress*. The lower court in the instant case, however, has extinguished this Court's doctrine in the Cress case although the facts in the instant case are stronger than the facts in *Cress*.

In *Cress* and in the instant case, the Government dam was on a navigable river and the owner's facility was on a nonnavigable stream, tributary to the navigable river. In *Cress* the effect of lifting the level of the navigable river in order to render it an artificial canal was to destroy the head for producing power in the nonnavigable stream. Had the Savannah been similarly lifted, the effect of the lifting upon the level of the Seneca would have left the owner's plant, at its point of elevation eight miles upstream, unaffected. In fact, however,

the impoundment lifted waters far beyond the bed of the Savannah; and, as a consequence, the flooding not only reached the owner's facility at Portman Shoals and destroyed its power head, it inundated the entire dam, fast lands and generating equipment comprising the facility.

Grand River did not "squarely refute and rebuke" *Cress*. This Court in *Grand River* expressly stated that it was not necessary that it reach the Government's contention in that case "that the navigational servitude of the United States extends also to nonnavigable waters, pre-empting state-created property rights in such waters, at least when asserted against the Government." The court below not only adopted the Government's contention, but went beyond its contention stating: "The commerce clause in its application to the waterways of the United States, is not limited to the control of navigation."[2] More importantly, it failed to recognize the obvious basis of the opinion in *Grand River*.

In *Grand River* this Court stated that no property was appropriated but only a prospective business opportunity was lost and an enterprise frustrated. This Court states in a footnote to its opinion that no riparian land was involved and notes this as the distinguishing feature to *Cress* on the Kelly appeal where "in substance there was a taking of land."

Petitioner does not contend, and has not contended, that the United States cannot build a dam on a nonnavigable stream as in *Oklahoma v. Guy F. Atkinson*, 313 U.S. 508 (1941) and *Grand River* and thus frustrate the plans of a state authority to develop the stream or overrule the objection of a state to such development. The court below, however, fail-

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[2]The contention of the United States and the theory of the decision of the court below were never raised in the District Court by the respondent. The trial was had under an entirely different theory. The amended complaint of the United States prayed:

"1. That if the Seneca River is determined to be navigable, that just compensation be ascertained and awarded for the taking of only that portion of land described which is not subject to the plaintiff's navigation servitude;

"2. Or in the alternative, that if the Seneca River is determined to be nonnavigable, that just compensation be ascertained and awarded for the land described in the new description and for such other relief as may be lawful and proper."

The new description included the developed property in the bed of the stream.

ed to distinguish (as did the Court of Claims in its Grand River decision) between the frustration of a proposed enterprise on a nonnavigable stream and the taking, without compensation, of an existing development on a nonnavigable stream which does not affect downstream navigation.

The ultimate power of regulation possessed by the United States over nonnavigable tributaries in order to preserve or promote commerce on downstream navigable waters is not in question. The District Court, not only found that the Seneca was nonnavigable; it also found that the navigable capacity of the Savannah was not affected by petitioner's Portman Shoals plant.

The power of regulation by the United States over interstate commerce under the commerce clause, as applied to the waterways of the United States, though perhaps not limited to the regulation of navigation, has never before been extended to the appropriation, or the destruction, of private property without compensation, where such property was a developed project in a nonnavigable stream and when it did not affect downstream navigation. "Regulation of interstate commerce" manifestly should not be equated with confiscation of vested property rights.

U.S. v. Kansas City Life Insurance Company, 339 U.S. 799 (1950), is an explicit reaffirmation of the *Cress* doctrine. There the United States was charged with destroying property values by artificially retaining the Mississippi River constantly at its ordinary high water level and overflowing riparian lands on a nonnavigable tributary.

If *Willow River* could be said to have "straitened" the authority of *Cress* and *Grand River* could be said to have "refuted and rebuked" *Cress*, as determined by the court below, then it must be acknowledged that these cases are inconsistent with *Kansas City* as well as with *Cress*. The decision of the court below stands in direct conflict not only with *Cress*, but also with *Kansas City*.

In *Kansas City*, Justice Douglas dissented. In his view the Government should have no responsibility for the consequences in nonnavigable tributaries so long as the effect on the

tributary comes from raising a navigable stream to some level not exceeding its ordinary high water mark. He would allow the Government, in the exercise of its dominant servitude, to lift a navigable stream to its ordinary high water mark, and the protection of the servitude would cover not only the bed of the navigable stream but would also extend as far upstream "as the effects of the lifting must go." This was the basis of his dissent and his criticism of *Cress*, where the impoundment was for the purpose of raising the level of the navigable stream so as to render it an artificial canal. While he would go this far in order to "allow the United States the full use of its dominant servitude in a navigable stream", it is clear he would go no further. See concurring opinion in *U.S. v. Virginia Electric and Power Co.*, 365 U.S. 624, 636 (1961). No voice of this Court has ever been raised in support of extending the servitude beyond this point.

Of course, as we have stated, the effect on the Seneca of lifting the Savannah no higher than its ordinary high water mark would not reach the landowner's facility at Portman Shoals. Thus, it is seen that the landowner's claim in the instant case is in fact stronger than the claims in *Kansas City* and *Cress* where, in both cases, this Court upheld the right of compensation.[3]

2. The primary basis for urging certiorari is that the Fourth Circuit has failed to follow the decisions of this Court on a matter of great national consequence. It should be noted, that in refusing to follow *Cress*, the Court of the Fourth Circuit is alone.[4] It is not safe to assume, however, that the unsettling effect of the opinion below upon property

[3]In *Kansas City*, this Court pointed to the "ample notice over the years" that navigable streams are subject to a dominant public interest which has "crystallized in terms of servitude over the bed of the stream." By like token, of course, landowners over the years have taken notice that their private titles in nonnavigable streams are not burdened with this servitude. It is difficult to conceive how valuable investments in the nation's nonnavigable water courses, recognized as property interests, under the principles enunciated in *Cress* and *Kansas City*, when made, may now be divested, without compensation. It is not consistent with this Court's traditional notions of justice that property rights can so easily be discarded.

[4]As recently as 1965, the Court of the Third Circuit cited *Cress* as valid authority. *Borough of Ford City v. U. S.*, 345 Fed. 2d 645.

interests in nonnavigable streams will be confined to the several states of the Fourth Circuit. Thus, in order to resolve presently conflicting views between the Circuits and to prevent future additional conflicts, certiorari in this case is justified.

3. The question before this Court on this petition involves the status of property interests in nonnavigable streams throughout the nation. It is difficult to find a nonnavigable stream, the waters of which do not flow ultimately into some navigable stream. It is a matter of general knowledge that many hydroelectric plants and small dams were built on many of the nonnavigable streams in this country or on streams that were considered nonnavigable in the very late 1800s and early 1900s.[5] Many of them are probably in operation today.[6] As in the case of petitioner's Portman Shoals plant, many of them were probably constructed on nonnavigable streams under state law in reliance upon the general principle of the law recognized in many, if not most, of the eastern states that riparian proprietors, at least on nonnavigable streams, own the land to the center of, or the thread of, the stream and that they are entitled to reasonable use of the water from the stream including the right to have the water flow by, through, and away from their riparian lands. 56 Am. Jur., Waters, Secs. 13, 455, pp. 501, 869. This was the law of Kentucky which was

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[5]Petitioner's Portman Shoals Dam was built in the period from 1896-1898 as one of the early hydroelectric projects in the nation to provide electricity to Anderson, South Carolina, which was then known as "The Electric City."

Water Power Engineering, Barrows (McGraw-Hill Book Co., 1926, p. 10, table 4) lists 2382 water power developments in the United States. In New England alone there were 1228 developments having an average size of only 1130 horsepower.

[6]*Register of Dams in the United States*, compiled and edited by T. W. Mermel, and sponsored by the United States Committee of the International Commission of Large Dams (McGraw-Hill Book Co., Inc., 1958) lists more than 2800 dams completed, under construction, and proposed, for the purposes of irrigation, recreation, power navigation, flood control, and water supply, and ranging in height from a few feet to more than 500 feet.

Hydroelectric Power Resources of the United States, published by the Federal Power Commission (1964) (FPC P-34) lists more than 1600 existing hydroelectric projects on all streams, navigable and nonnavigable. (Table 4) No more than 170 of the existing dams are Federal projects; the remainder being non-Federal. Of the remaining 1430, no more than 400 are licensed by the Federal Power Commission (Table 12), presumably on the larger and navigable rivers.

recognized in *Cress* and the law of Missouri which was recognized in *United States v. Kansas City Life Insurance Co.*, 339 U.S. 799. It is the law of South Carolina where the instant case arises. *Omelvany v. Jaggers*, 2 Hill. 634, 27 Am. Dec. 417 (1835).

Settlement of the question of vested property rights in nonnavigable streams by this Court is plainly in the public interest. The holding below is not limited to hydroelectric or other water power developments. It would apply equally to all structures across or in nonnavigable streams, such as dams creating impoundments for water supply or recreation, intake structures for domestic or irrigation water supply systems, bridge piers and spans and recreational structures. Taken logically, it denies any property right to use nonnavigable waters as they flow past riparian owners. The status of property rights of riparian owners in nonnavigable streams throughout the nation should be removed from doubt.

For the foregoing reasons, this petition for a writ of certiorari should be granted.

Respectfully submitted,

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APPENDIX

APPENDIX A—OPINION OF CIRCUIT COURT

(Argued June 1, 1966. Decided September 21, 1966.)

Before SOBELOFF, BOREMAN and BRYAN, Circuit Judges.

Edmund B. Clark, Attorney, Department of Justice, (Edwin L. Weisl, Jr., Assistant Attorney General, Roger P. Marquis and Howard O. Sigmond, Attorneys, Department of Justice, and John C. Williams, United States Attorney, and Robert O. DuPre, Assistant United States Attorney, on brief) for Appellant, and David L. Freeman, Wm. I. Ward and William L. Watkins (Carl Horn, Jr., General Counsel, Duke Power Company, on brief) for Appellees.

ALBERT V. BRYAN, Circuit Judge:

These two eminent domain cases arise out of the establishment by the United States of the Hartwell Dam and Reservoir Project,[1] a flood control venture on the Savannah River, the South Carolina-Georgia boundary. In each, claim was made for just compensation for "rights" extinguished by the waters impounded by the Dam. In No. 10,421, the claimant is J. P. Stevens & Company, Inc.; in No. 10,422 the Duke Power Company.

Claimants were riparian owners along the Seneca River, a source-tributary in South Carolina of the Savannah. Acceptable compensation has been made to them for such fast land as was acquired or inundated by the Government in the undertaking. The sole question is whether it must also compensate Stevens for the loss of its waste-disposal use of the Seneca, and Duke for the loss of water power, all of

[1] Act of December 22, 1944, P.L. 534, 78th Congress, 58 Stat. 887; Act of May 17, 1950, P.L. 516, 81st Congress, 64 Stat. 163; Act of September 10, 1959, P.L. 86-254, 73 Stat. 491.

which were enjoyed before, but were lost contemporaneously with, the impounding of the water.

The action against Stevens was begun August 9, 1960, that against Duke on October 21, 1960. A Commission was appointed by consent under F.R.Civ.P. 71A(h) to hear these and other cases together. It reported the claims as sustained in fact and in law, and fixed the compensation considered just and reasonable therefor. The District Court reached the same conclusions on independent findings as well as in approval of those made by the Commission. On the Government's appeal opposing any allowance whatsoever for the alleged losses, we reverse, holding that neither claim represents a vested property right of the condemnee.

The Seneca River commences in Anderson County, South Carolina, as a continuation of the Keowee River, and courses southeasterly for approximately 27 miles before joining the Tugaloo, at the now abandoned town of Andersonville, to form the Savannah River. The Stevens property, on which stands its Utica Mohawk textile plant, is located on the Seneca about 22.5 miles upstream from the Savannah's beginning at Andersonville. The Duke property, consisting of a dam, reservoir and hydroelectric machinery, is also on the Seneca at Portman Shoals, 8 miles above the formation of the Savannah. The Hartwell Dam is on the Savannah, 5 miles below Andersonville.

In width from 100 to 200 feet, with well-defined banks, the Seneca has an average depth of 3 to 4 feet. In its 27-mile reach to the Savannah, it falls 111 feet. Along the way, Portman Shoals extends for about 3 miles, descending 52 feet or an average of 17.37 feet per mile. Its depth at the Shoals varies from 1 to 2½ feet.

The navigability of the Savannah at Hartwell Dam is undisputed. The chief controversy at trial was whether the Seneca was navigable as far up, respectively, as the Stevens

and Duke holdings. Both the Commission and the District Court found it not to be a navigable stream at and between these locations. The allowance of Stevens' and Duke's claims rested on this determination. The reasoning was that the sovereign power of the United States over its waters, derived from the Commerce Clause of the Constitution, United States v. Appalachian Power Co., 311 US 377, 404 (1940), does not embrace nonnavigable streams; that the privileges enjoyed by Stevens and Duke, and erased by the impoundment of the Hartwell Dam, were not being exercised in a navigable stream; and therefore these were private rights which could not be taken without compensation. As our decision is not based in either instance upon the navigability or nonnavigability of the Seneca, we have no occasion to deal with this question.

The Stevens Case

The Stevens property consisted of 905.64 acres, of which the Government took 509.64 in fee and 21.49 in easements, a total affected acreage of 531.13. The original tract was roughly square, the Seneca River forming its east boundary, and Martin's Creek, which eventually enters the Seneca, forming most of the south boundary. The textile plant occupied 17 acres in the center of the square, but it was not included in the condemnation. Waste waters from the plant were discharged into an open ditch about 2800 feet in length, which emptied into Martin's Creek. The latter ran for 3300 feet before it joined the Seneca, some 22½ miles above Andersonville. For this distance Stevens owned, in fee or by easement, both sides of Martin's Creek. The Government's take embraced all of Stevens' interest in Martin's Creek, the open ditch and the land lying between the plant and the Seneca, extending to the river's ordinary high-water line.

The wastes, aside from treated domestic sewage, consisted daily of some 2,500,000 gallons of water, originally taken from the river and used in bleaching, dyeing, and finishing cloth. In the process starches and spent dye-stuffs were picked up, with the result that the discharge had a color of "strong coffee to weak tea". Indisputably, the waters of the creek were "heavily" or "grossly" polluted thereby. The contamination, principally, was a strong caustic alkalinity, not injurious to fish, livestock, irrigation and probably inconsequential to swimmers. Despite this infiltration, the Seneca waters, before the coming of the Hartwell Reservior, met the Class C rating of the South Carolina Pollution Control Authority.[2] It had issued a Class C permit to Stevens for the discharge into Martin's Creek and the Seneca.

The Hartwell Dam created a vast storage reservoir or lake behind it, overflowing and obscuring large areas beside the upper tributaries of the Savannah. This impound was devoted incidentally to public recreational purposes, such as boating, fishing and swimming. Important here, the back-up of the waters destroyed the flow and outfall from Stevens' open ditch into Martin's Creek and the flow of the latter into the Seneca.

In view of the reservoir's recreational functions, the State Water Pollution Authority, in admittedly valid proceedings, reclassified the receiving waters of the Seneca to Class A. This change, dictated by the "human element"—concern for the health of swimmers—meant that the river must be maintained in a purer condition than Class C waters, the higher standard excluding the reception of Stevens' wastes. After conferences and the rejection of several of its proposals, Stevens obtained a Class A permit on condition that it build, as it did, a disposal facility. This unit consists of a tower

[2] Code of Laws of South Carolina, 1962, §§ 70-101 et seq.

located on the Seneca's bank, with a foundation 60 feet beneath the lake's surface. The wastes are piped to the tower, there diluted with lake water, then pumped into a dispersal system and thence discharged into the lake through nozzles 50 feet below the lake level.

Stevens' argument for compensation is this: with Martin's Creek and the Seneca in their natural condition, the dumping of its untreated wastes into them was permissible as an inherent riparian property right; the Hartwell Project, in converting the creek and river into public recreational waters, brought about the river's reclassification; ergo the necessity for the installation of the disposal plant was directly and immediately attributable to the Government's action. In this connection Stevens refers to the testimony of the Authority's director that, but for the creation of the storage pool, Stevens could have continued indefinitely with the ditch-creek-river discharge. In this fashion Stevens endeavors to counter the Government's assertion that the decision of the Authority, and not the act of the United States, was the real cause of the river's reclassification and Stevens' outlay for the disposal plant.

The Commission and the District Court found that the cost of the construction and operation of this plant represented the fair value of the disposal privileges enjoyed by Stevens before the creation of the reservoir. As compensation for this loss, Stevens was awarded $550,000. The justness of this amount, if by law recoverable, is not challenged.

In our opinion Stevens' position is untenable, and the award cannot stand. Even if the Government is chargeable with preventing this use of the streams by Stevens, in doing so it took nothing belonging to Stevens. No absolute right, we hold, was vested in Stevens under the law of South Carolina to discharge industrial wastes into Martin's Creek or the

Seneca River. Utilization of the South Carolina streams is subject to the rights of other riparian owners, enforceable by them or by the Pollution Authority. The latter's control was exerted here in the reclassification and the legality of this action is not disputed. Indeed, the State's power was acknowledged by Stevens in seeking and obtaining initially the Class C permit and later the Class A permit. The fundamental and determinative question in this control, either at the instance of another proprietor or of the State, is the reasonableness of the use.

The State statute outlaws the discharge into streams of anything that may "cause or tend to cause a condition of pollution in contravention of the standards adopted by the Authority". § 70-116. Control of this kind by the State is unassailable. Texas Co. v. Montgomery, 73 FSupp 527, 534 (E.D. La. 1947) (3-judge court) aff'd 332 US 827. The common law of South Carolina provides a downstream owner with equivalent civil protection. Thus, even without the creation of the lake, Stevens could not with immunity have continued the objectionable efflux if a lower owner on the Seneca had adapted his riparian proprietorship to recreational purposes, undeniably a reasonable use. The effluence could have been stopped under either the common law or the statute.

In Duncan v. Union-Buffalo Mills Co., 110 SC 302, 96 SE 522, 524 (1917) the following jury instruction was approved:

> " 'Owners of land on the banks of a stream are entitled to the reasonable use of the stream; that they can use the stream for their own purposes to a reasonable extent; that while it is true that a stream must not be polluted, still this does not mean that nothing can be put in the stream; but that *nothing can be put therein that*

will deprive the landowners below to the reasonable use of the stream.'" (Accent added.)

No contrary pronouncement of the South Carolina common law was uttered in Omelvany v. Jaggers, 2 Hill (SC) 634 (1835). The case is cited by Stevens as support for its contention that the Government cannot destroy, without indemnification, a use by Stevens which was reasonable under the natural conditions of the river. *Omelvany* simply held that a lower owner could not by a dam or other construction "throw back" the water so as to interfere with the flow past the upper riparian owner's property. Also cited, White v. Whitney Mfg. Co., 60 SC 254, 38 SE 456 (1901) is to the same effect.

But that of course is not Stevens' complaint. Its grievance is that it can no longer put refuse into Martin's Creek or the Seneca. Plainly this is not a problem of flow, but rather of what ingredients can be put in the water. Stevens' difficulty is the prohibition against pouring a deleterious additive into the creek or river. We see no merit in this plaint.

Throughout it must be remembered that Stevens does not complain that it has been robbed of the natural drainage of surface waters from its land. Hence we are not called upon to say whether under the law of South Carolina such drainage is an appurtenant right. Cf. United States v. Kansas City Life Ins. Co., 339 US 799, 810, 814 (1950) and dissenting opinion. Nor has Stevens' access to the river for riddance of its wastes been blocked, notwithstanding the taking of the area between the industrial plant and the river. For our decision, it may be assumed that before the condemnation Stevens' ownership extended to the center of Seneca's bed, thus conceding arguendo Stevens' contention that the river was nonnavigable.

The bar interposed by the Water Pollution Authority to Stevens' dumping of wastes into the river was, obviously, undertaken as a health measure well within the State's police power. The United States had not protested the infusion of the wastes into the reservoir. The objection emanated from the Authority. Thus, if Stevens deemed the restriction unreasonable, its remedy was to apply to the Authority for relief and if unsuccessful there, to pursue the further corrective steps provided by the statute.[3] Certainly the ban created no obligation upon the United States to make good the loss.

Our decision to disallow compensation is not at odds with Town of Clarksville, Virginia v. United States, 198 F 2d 238 (4 Cir. 1952), cert. den. 344 US 927 (1953). The United States by damming the adjacent nonnavigable river flooded almost half of the Town, the condemnee, and rendered its sewerage system useless. As compensation for what it destroyed the Government agreed to provide, or pay for, an equivalent substitute system. It also agreed to include therewith a sewerage treatment plant, pumping or lift stations and the cost of the latter's operation should the condemnation court hold that such accessories were indispensable to constitute the new system a just equivalent of the old. The State Water Control Board had ruled that the new system could not empty into the river unless a treatment plant was installed, although none had been included previously. We held that the District Court erred in not requiring the Government to provide these additional facilities, because they were thought necessary to fulfill the Government's pledge that the new should be equal of the old system.

But here the Government, to repeat, took no part of Stevens' disposal plant and conceded no obligation whatso-

[3] § 70-131.

ever to the condemnee, as it did in *Clarksville*. The only question there was the amount of compensation; here liability for any amount at all is the issue. Stevens had no vested right to contaminate the watercourses. It was creating the wastes as a part of a private operation and the elimination of the pollution was Stevens' responsibility. The cost of a satisfactory alternate method must be borne by Stevens, and cannot be shifted to the United States.

The noncompensability of Stevens' claim has thus far been pitched upon State laws, under which continued indulgence to defile a stream has been found not to be a legal right. Recently, Congress by Act of October 2, 1965, P.L. 89-234, 79 Stat. 903, 33 USC 466 et seq., has undertaken to protect not only interstate waters but also the tributaries thereof from pollution. While we do not place our decision on Federal statutes, we mention them to show that National policy buttresses South Carolina's.

The Duke Case

Duke owned 954.2 acres of land along the Seneca, including 106.40 acres in its bed. The United States condemned 531.1 of them, excluding any portion of the bed but including 27.4 acres occupied by Duke's dam and reservoir. These units, plus a powerhouse, substation and transmission lines, together constituting the hydroelectric facilities, were entirely obliterated by the lake. Built in 1898 and located at Portman Shoals, they were 14 miles below Stevens' plant, 8 miles above the Savannah and 13 miles up from the Hartwell Dam.

The Commission's report, approved by the Court, allotted Duke $37,775 for the 503.7 acres exclusive of the dam and reservoir. Duke was also awarded $500,000 as the fair value of the hydroelectric facilities. The Government does not contest the computation or fairness of these figures, if as a

matter of law the components are recoverable. The controversial point posed by the Government's brief is the allowance of any amount whatsoever for the productivity of the hydroelectric power, the predominant factor in the $500,000 judgment.

Here again the issue raised is the navigability of the Seneca. Duke asserts that its dam and reservoir are situated in nonnavigable waters, and that the Constitutional power of the United States to regulate navigation does not empower the Government, without making compensation, to take or destroy property not situate within navigable waters. The United States' opposing argument, aside from its basic assertion of the navigability of the entire Seneca, is two-fold. First, it is that the Commission and the District Court did not find the Seneca waters to be nonnavigable below Portman Shoals; that Duke's dam, at the foot of the Shoals, uses this section of the Seneca as a tail race; and that this dam is therefore within the Government's control over navigable waters. Secondly, the United States says that in any event the Seneca River is subject to the control of the Government as a tributary, though nonnavigable, of the navigable Savannah, and that the United States took nothing from Duke when it abolished Duke's continued adaptation of the Seneca waters for the generation of electricity.

We accept the latter postulate, and so have no reason to consider the scope or correctness of the findings below in regard to the Seneca's navigability.

The Commerce Clause in its application to the waterways of the United States is not limited to the control of navigation. In United States v. Appalachian Power Co., supra, 311 US 377, 426 (1940), the comprehensiveness of the Constitutional provision was stated:

> "In our view, it cannot properly be said that the constitutional power of the United States over its waters

is limited to control for navigation. By navigation respondent means no more than operation of boats and improvement of the waterway itself. In truth the authority of the United States is the regulation of commerce on its waters. Navigability, in the sense just stated, is but a part of this whole. Flood protection, watershed development, recovery of the cost of improvements through utilization of power are likewise parts of commerce control."

The Acts[4] authorizing the United States to expropriate the property and other rights included in these cases are predicated on this extensive power of control. That tributaries of navigable waters are within its comprehension is no longer debatable.

This is made quite plain in Oklahoma v. Guy F. Atkinson Co., 313 US 508 (1941). There the Constitutional prerogatives of the Government in respect to the control of inland waters in the advancement of interstate commerce are exhaustively examined. The enormous expansiveness of this power is described. Congress had authorized the construction in Oklahoma of a dam across the Red River, a nonnavigable tributary of the Mississippi River. The enterprise was held well within the power of the Federal Government to provide flood control and regulate navigation. The Court demonstrated the close relationship of the two, and made these pertinent observations:

"It is true that 'no part of the [Red] river within Oklahoma is navigable.' " (p. 523)

* * *

". . . it is clear that Congress may exercise its control over the nonnavigable stretches of a river in order to

[4] See citations in footnote 1, supra.

preserve or promote commerce on the navigable portions." (p. 523)

* * *

"Congress was not unmindful of the effect of this project on the navigable capacity of the river." (p. 523)

* * *

"There is no constitutional reason why Congress cannot, under the commerce power, treat the watersheds as a key to flood control on navigable streams and their tributaries." (p. 525)

* * *

"And we now add that the power of flood control extends to the tributaries of navigable streams. For, just as control over the non-navigable parts of a river may be essential or desirable in the interests of the navigable portions, so may the key to flood control on a navigable stream be found in whole or in part in flood control on its tributaries." (p. 525-526)

The pertinency of these words presently is underscored when we bear in mind that the Seneca and the Savannah are not different rivers. Although bearing different names they constitute a single waterway. Consequently, as just quoted, the Federal power of control over the Seneca may be justified as control over a nonnavigable stretch of the navigable Savannah. Some analogy may also be found in the facts of United States v. Chandler-Dunbar Water Power Co., 229 U.S. 53 (1913) where the Government was accorded paramount rights in the nonnavigable falls and rapids in the St. Marys River, the outlet of Lake Superior's waters.

Furthermore, *Oklahoma* v. *Guy F. Atkinson Co.*, *supra* 313 US 508, held that the Government's determination that a particular project is needed to properly regulate navigation is conclusive. Thus we are not at liberty to inquire whether the Hartwell Dam and Reservoir was an appropriate exercise of Federal jurisdiction.

Here we are dealing only with the *flow* of the Seneca. Wherever the Government has submerged or otherwise deprived the proprietor of rights above the river's ordinary high-water mark, uncontested recompense has been made. The attack on the Duke award is concentrated upon its allowance for water power. This component is not compensable, we have said, and United States v. Grand River Dam Authority, 363 US 229, 233 (1960), sustained this proposition in these words:

> "When the United States appropriates the flow either of a navigable or a *nonnavigable* stream pursuant to its superior power under the Commerce Clause, it is exercising established prerogatives and is *beholden to no one.*" (Accent added.)

This had in effect been the pronouncement of the Court in United States v. Willow River Power Co., 324 U.S. 499 (1945).

Undebatably, United States v. Cress, 243 U.S. 316 (1917), in the Kelly appeal No. 718, relied upon by Duke is a holding contrary to our conclusion here. There on the construction by the Government of a dam across a navigable river, water was backed up in an unnavigable tributary, thus raising its level above the ordinary high water mark of the tributary. The result was to destroy the power of a mill dam, essential to the value of the mill, by leaving

only a one foot drop over the crest of the mill dam. The owner was allowed compensation.

However, *Cress* on the Kelly appeal has been so severely pared as a precedent on the present point that we do not feel justified in allowing it to prevail here. Its scope was sharply straitened by United States v. Willow River Power Co., supra, 324 U.S. 499, 506; the diminution was noted in the dissent. Finally, *Grand River,* supra, 363 U.S. 229, squarely refutes and rebukes the thought that *Cress* warrants recovery by Duke.[5]

The contention of Duke that Congress by statute, 33 USC 701c-1, has directed payment to Duke for its facilities at Portman Shoals, we find without merit.

The judgments awarding compensation for the contested items in these cases will be reversed, and the actions remanded to the District Court for the entry of appropriate orders denying the present claims of Stevens and Duke.

Reversed and remanded.

[5] Authorities excluding flow in a *navigable* stream as an element of valuation in the condemnation of riparian properties are not cited because the questions in the instant cases are raised with specific reference to *nonnavigable* waters. For examples of such other authorities, see United States v. Virginia Electric & Power Co., 365 US 624 (1961); United States v. Twin City Power Co., 350 US 222 (1956).

APPENDIX B—OPINION OF DISTRICT COURT

IN THE DISTRICT COURT OF THE UNITED STATES FOR THE WESTERN DISTRICT OF SOUTH CAROLINA, ANDERSON DIVISION

Civil Action No. 2814

UNITED STATES OF AMERICA, PLAINTIFF,

versus

531.10 ACRES IN ANDERSON COUNTY, SOUTH CAROLINA, and DUKE POWER COMPANY and UNKNOWN OWNERS, DEFENDANTS.

ORDER

(Filed August 3, 1965)

The issues before the court in the instant case are based upon objections by plaintiff, United States of America, to the Report filed December 31, 1963, of a Land Commission appointed in condemnation proceedings for the Federal Hartwell Dam Project on the Savannah River. The order by Judge C. C. Wyche, Western District of South Carolina, December 4, 1961, appointing the Commission pursuant to Rule 71-A of the Federal Rules of Civil Procednre, provided in part that the Commission would:

> "... take testimony ... regarding just compensation and any question of title which may arise in each of the tracts, and render a full report to this Court with regard to said questions and such other questions as may arise, together with their recommendations concerning their conclusions of law and fact."[1]

No exceptions to this order were taken by the Government or the landowners.

The property of defendant, Duke Power Company, with which this suit is concerned consisted of 503.7 acres of land and a hydroelectric dam and power plant which was built in 1898, by Duke's predecessor in title. The dam and power

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[1] The Commission was appointed by Judge Wyche to hear this as well as several other cases.

plant were situated on the Seneca River sometimes referred to as the Keowee River at Portman Shoals and were generally known as the Portman Plant. The impoundment of waters by the Federal Hartwell Dam project flooded the entire length of the Seneca and inundated the Duke Power Company project. The Seneca is a tributary of the Savannah River, upon which the Hartwell Dam is located.

The suit was commenced by the filing of a complaint without a declaration of taking on October 21, 1960. By stipulation it is agreed that December 9, 1960 was the date of taking.

Plaintiff has objected to the findings and conclusions of the Commission that the Seneca was a non-navigable stream, and that defendant was entitled to compensation for the taking of its land, and the dam and power plant situated thereon. The Government also objects to the Commission's measure of value as to the land, the power plant facilities, and to the total award made in favor of Duke in the sum of $528,158.00.

The question of the navigability of the Seneca is of foremost importance in this case, as well as in the companion case involving the condemnation of the property of J. P. Stevens Co., Inc., at its textile plant located on the river a few miles upstream from Portman Shoals.[2]

By stipulation of the parties the testimony relating to the vital issue of the navigability of the Seneca River was taken for consideration in this case, and also in the condemnation proceeding against the J. P. Stevens Co., Inc., property. In addition, the Commission's findings of fact and conclusions of law on the issue of navigability were the same in both condemnations; and objections to the Report of the Commission made by the Government in the condemnation of the property of J. P. Stevens and Co., Inc., were argued before me at the same time arguments were heard in this case.

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[2] United States of America v. 531.13 acres and J. P. Stevens & Co., Inc., et al., C/A # 2788.

A full day was devoted to oral arguments, briefs on all questions raised have been submitted by counsel for the parties. Their briefs as to the navigability question are addressed to the Duke and Stevens cases since that issue is identical in both. I have arrived at the same conclusion in each case insofar as the issue of navigability of the Seneca River is concerned.

Two basic questions are raised by the Government's objections to the Commission's Report in this case: (1) Is the Seneca River a navigable stream of the United States? (2) Is the Commission's total award of $528,158.00 so clearly erroneous as to preclude affirmance by this court?

The Government contends that Duke Power Company is not entitled to compensation for its hydroelectric facility upon the following grounds: (a) That the facility was located in the bed of a navigable stream of the United States in which plaintiff had a paramount servitude which relieved it of any obligation to pay for structures located in beds of navigable streams, upon the premise that hydroelectric values on navigable streams are non-compensable. *United States* v. *Twin City Power Co.*, 350 U.S. 222 (1956). (b) That even if the Seneca is found to be a non-navigable tributary of the Savannah River, plaintiff would not be indebted to defendant for its use and control of the flow of the non-navigable tributary in improving the navigability of the adjacent navigable stream, under the Commerce clause of the Constitution. *United States* v. *Willow River Co.*, 324 U.S. 499 (1945); *United States* v. *Chicago, M. St. P. & P. R. Co.*, 312 U.S. 592 (1941); *United States* v. *Grand River Dam Authority*, 363 U.S. 229 (1960).

Before the Commission and in its arguments and briefs before me the defendant landowner not only strongly urged that it was entitled to just compensation for its facilities taken and flooded by plaintiff because the Seneca was non-navigable; but it also asserted alternate positions alleging that it was entitled to compensation for said facilities even though it were determined that the stream was in fact navigable. These alternate positions were not considered and

passed upon by the Commission because of its determination that the Seneca was non-navigable. Neither have I considered such alternatives, inasmuch as I concur in the Commission's determination that the Seneca is a non-navigable stream, and that plaintiff's sovereign servitude does not extend to such non-navigable waters under the facts presented in this case.

The court will first consider the Government's objection to the Commission's conclusion that the Seneca River is not a navigable stream of the United States.

Plaintiff stoutly urges that the question of navigability is one of law for the court rather than the Commission to determine in the final analysis; or that it is a mixed question of fact and law, and that the "clearly erroneous" rule does not apply to the court's review of the Commission's findings and conclusions in this regard, citing *United States* v. *Appalachian Power Co.*, 311 U.S. 377 (1940); *United States* v. *91.69 acres in Oconee County, S. C., Excelsior Mills, Inc.*, 334 F.2d 229 (4th Cir. 1964); *United States* v. *Waymire*, 202 F.2d 550 (10th Cir. 1955); *United States* v. *5,677.94 acres in Montana*, 162 F.Supp. 108 (D.C. Mont. 1958). In view of this position of the Government, I have reviewed the record fully, have considered all of the evidence presented by the parties to the Commission, and have made an independent determination of my own as to the navigability of the Seneca River. In reaching this judgment all of the Government's exceptions to the findings of the Commission have been considered; and as such exceptions are too numerous to repeat, I shall comment only upon those I deem especially significant in making my determination.

The Seneca is a stream approximately 27 miles long formed by the confluence of the Keowee River and Twelve Mile Creek. The Seneca and the Tugaloo Rivers come together to form the Savannah River. At the confluence of the Seneca and Tugaloo was formerly the site of a town called Andersonville which has long since been abandoned. Navigation was effected on the Savannah River up to that point. Portman Shoals, where defendant's dam and hydro-

electric plant were situate, is approximately eight miles upstream on the Seneca above the old site of Andersonville.

The Seneca-Keowee River was formed by the confluence of several smaller mountain streams originating in the Blue Ridge Mountains of North Carolina. These tributaries of the Savannah River are fairly swift streams in which are located many shoals. Witness Stribling, an engineer employed by Duke, testified that he made a survey of the shoals in the Keowee-Seneca River in 1942 finding 86 shoals in the 54 miles from the mouth of the Keowee to Andersonville at the head of the Savannah River. Portman Shoals, the most formidable of all, extended over a three mile area. The river fell 52 feet, or an average of 17.37 feet per mile, over this three mile stretch. This shoal area presented the most burdensome obstacle in navigating the river. Stribling testified that in making the survey in 1942 he found the depth of the river varied from less than one foot to 2½ feet over most of the shoals; and that it was impossible to float his canoe on many of its stretches.

James W. Blair, a witness for plaintiff, made a survey of the Seneca River during 1929-1930 for the Corps of Engineers as part of project to determine the possibilities of the full development and utilization of the entire Savannah River system. He testified that the Seneca was a "nice meandering" stream with well-defined banks and some bars in the river. He found the deep run or "thalweg" of the river to average about three feet. This depth varied with the width of the river.

Stribling and Blair presented the most graphic account of the physical characteristics of the river. There is no evidence in the record to indicate that the river underwent any marked changes in its physical characteristics over the years.

The question of navigability of a stream is a federal question which must be decided under federal law. *United States* v. *State of Utah*, 283 U.S. 64, 75 L.Ed. 844 (1931). *United States* v. *Holt State Bank*, 270 U.S. 49 (1926). Of paramount consideration is the susceptibility of the river or stream for use as a channel for useful interstate com-

merce in its natural state; and not necessarily the extent and manner of the actual use; and a river is navigable in law which is navigable in fact. *Daniel Ball,* 10 Wall (U.S.) 557, 19 L.Ed. 999; *The Montello,* 20 Wall (U.S.) 430. In *United States* v. *Appalachian Power Company,* 311 U.S. 377, 61 S.Ct. 291, 85 L.Ed. 243 (1940), the court pronounced that the test of navigability is not to be confined to the natural and unimproved condition of a river or stream, but that "it is proper to consider the feasibility of interstate use after reasonable improvements which might be made." The Court clarified this requirement, however, by stating that "[t]here must be a balance between cost and need at a time when the improvement would be useful." 311 U.S. at page 407.

The burden of proof rests herein upon the Government to establish the Seneca's navigability. *United States* v. *Rio Grande Dam and Irrigation Co.,* 174 U.S. 690 (1899).

Considering the legal principles cited herein, I find that plaintiff has failed to establish that the Seneca is a navigable stream of the United States; and on the contrary I have concluded that the Commission was clearly correct in its determination that it is non-navigable, and that no useful channel for commerce ever existed on the Seneca at any time in his history.

A review of the evidence presented before the Commission by both parties reveals that there is a paucity of information relating to the question of the navigability of the Seneca River. Each party relied principally upon historical facts to sustain its position.

The Government presented Dr. Gustavus G. Williamson, Jr., Associate Professor of Economics at the University of South Carolina, as an "historical witness". Defendant's "historical witness" was Dr. Daniel W. Hollis, Professor of History at the University of South Carolina. Both of these men were well qualified to testify. Dr. Williamson concluded that there was navigability on the Seneca-Keowee River during the early nineteenth century, while Dr. Hollis concluded that there never had been any substantial, economically useful navigation of the river. The opinions of

both experts were predicated generally upon the same information, with each arriving at varying determinations as to the question of navigability.

The most significant historical evidence relating to navigation on the river as testified to by both Dr. Williamson and Dr. Hollis, is as follows:

In 1791 the General Assembly of South Carolina passed an Act for opening and improving the navigation of several rivers throughout the State, including the Seneca and Keowee Rivers. In 1811 the South Carolina Legislature passed legislation which recognized the assistance of boat sluices on the Seneca. In 1819 the Legislature established a Board of Public Works to take over the improvement of navigation on state rivers. In 1820 the Commission established by the 1819 legislation made its first report to the Legislature concerning possible improvements of navigation on several rivers. This report stated in part:

> "An examination of the principal shoals of the Keowee River [Seneca-Keowee] was made during the summer, Portman Shoals where the River falls 52½ feet in 2 miles, present a serious obstacle to the improvement of this river. The fall is too great to be overcome by opening channels in the bed of the river, and the fact of the country near the banks is so broken and precipitous as to render any improvement by a canal and locks a very expensive undertaking not warranted by the extent of navigation above these shoals."

The Board of Public Works which was created by the 1819 legislation was headed by a Colonel Blanding around 1820. In a report made to the Legislature about this time, Colonel Blanding considered the Seneca to be navigable, having but one difficult shoal in a distance of nearly 30 miles, that at Portman Shoals. He also noted that it was doubtful whether navigation could be effected for ascending boat traffic over Portman Shoals, but stated that boats carrying 40 or 50 bales of cotton had descended over the shoals from the mouth of Twelve Mile Creek. Colonel Bland-

ing made a subsequent report in 1824 in which he told of a trip he made up the Seneca River; he reported essentially that all of the shoals in the river were very gradual and easily sluiced except at Portman Shoals, where the stream was rapid, much obstructed by rocks, with numerous ledges crossing the stream. He determined, however, that a sluice navigation through Portman Shoals could be rendered easier and safer than on many parts of the Savannah River. He entered at this time into contracts with the Lawrence brothers and Archibald Bowman to construct a sluice through Portman Shoals.

In 1828 the South Carolina Legislature passed another Act concerning the public works of the State, and provided that the Superintendent of Public Works should proceed to enforce the contracts entered into [by Blanding] respecting the navigation of the Seneca River. In 1829 Whitner, the Superintendent of Public Works, reported to the Legislature as follows:

> "On the 14th and 15th of October, I proceeded to make [the] examination of the Seneca. The sluicing of this river had been let out in two contracts, in June, 1824, to Archibald Bowman, and to James and Elisha Lawrence. The river was in a favorable state for the examination, being some inches lower than a common summer river, and the water very clear. I found that the contracts had been substantially complied with, except in a few instances, which it is not necessary to embody in this report. These defects in the work of the Messrs. Lawrence were pointed out to them on the spot and on their agreeing to have the additional work done speedily, I have concluded to give them this opportunity before taking any other steps. In Bowman's work also, there was found some deficiency, but as his contract has been cancelled, I have only felt myself at liberty to request of him to do some additional work where it seemed most important, and which he has promised to do. * * *.

The river has been greatly improved by the work done on it, but in some instances the *benefit is confined solely to the descending trade, for in rendering that less dangerous, the ascending navigation has been made more difficult.* The great obstacle is Portman's Shoals, where in one instance, the fall is upwards of six feet in about one hundred yards. In such a place, a straight sluice is necessary to enable boats to descend with safety, while a more winding course, by lengthening out and breaking the force of the fall, is just as necessary for ascending. *This navigation therefore can only be made to answer any very useful purpose, by having double sluices through the most difficult shoals.*" [Emphasis added].

This was the last report concerning State efforts to render the river navigable. It does not appear that the Federal Government ever undertook to study the streams navigational possibilities, nor did it make any efforts to improve its navigation.

In addition to the official reports mentioned above, historical documents were presented to the Commission in which different individuals had spoken of the Seneca and Keowee Rivers as being navigable. The first of these reports, relied upon Dr. Williamson, was a statement made some time prior to 1808 by a Dr. Edward Darrell Smith to the effect that the Seneca River and Portman Shoals had recently been made navigable, and that boats could be safely navigated down the Seneca to Augusta. Dr. Williamson however admitted that he found this statement in an appendix to a work entitled "Ramsay's History," and that historically speaking, this was a secondary source. Furthermore, Dr. Hollis during his testimony exhibited a petition signed by residents of the Pendleton area in 1821, seeking to have the Seneca River made navigable, and one of the signatures appearing on this petition was that of the same Edward Darrell Smith who had made the above statement prior to 1808.

The Government also relied upon a statement made in 1818 by one Robert Mills, a civil and military engineer, that the Seneca River was navigable for boats drawing 2 or 3 feet of water during the rainy season. There was another report by a Colonel Gresham, included in the papers identified as the "German Colony Protocol", in which he said in 1849 that the Seneca River was navigable for any boats that went from Augusta to Andersonville. However, Dr. Hollis stated that he could find no account of the German Colony using navigation on the Seneca River; and he reached the conclusion that such report above was made as an inducement to interest prospective settlers in the area.

There is no evidence of any traffic on the river by the early settlers or the Indians prior to the Nineteenth Century.

The only evidence of any actual commercial use of the river by boat was recounted by David Lawrence, witness for the Government who testified by deposition. He stated that his father and another man built a boat and used it to haul cross-ties and lumber over a 12 miles stretch of the river above Portman Shoals during a six year period ending about 1896. He also testified that there were some instances of logs being floated down the Keowee-Seneca above Portman Shoals. All of this use of the river was entirely intrastate, and there was no intimation in the record that it could have been extended through the hazards of Portman Shoals, so as to "form a continued Highway" over which commerce might be carried on with other states and foreign countries. *The Daniel Ball*, 10 Wall [U.S.] 557. Lawrence, who stated that he was 86 years old at the time of the taking of the deposition, also related a story about being told that his grandfather operated a trading boat along the Seneca River and navigated Portman Shoals. The defendant objected to this testimony as being hearsay, and not coming within the family history exception to the hearsay rule. The Commission refused to receive and consider this evidence. I concur with the ruling of the Commission in this regard. Considering all of the testimony of this par-

ticular witness, his advanced age, the fact that his account of his grandfather's boat does not appear in any historical source concerning the river, and his lack of detailed knowledge concerning the alleged operation of this boat, this legend would have little probative value and fails to meet the prerequisites of truthfulness and accuracy. Even assuming that this evidence is competent, I do not feel that it is sufficient to tip the scales in favor of navigability, nor does it establish that the Seneca was a useful channel of commerce.

The Government also contends that two rulings by the Federal Power Commission determining that the Seneca-Keowee River was navigable are conclusive on the court, if supported by substantial evidence. These rulings were issued ex parte and without evidentiary hearings. They did not represent a judicial determination. The same contention was made by the United States before the Fourth Circuit Court of Appeals in *United States* v. *Appalachian Electric Power Co.*, 107 F.2d 769 [1939]. In rejecting this premise the Court said at page 791:

> "In the first place, it is argued that in this proceeding the findings of the Commission with respect to navigability and the effect of the dam on navigability, and on interstate commerce, are conclusive if supported by substantial evidence, which is asserted to be the case here. It is not disputed that the case can be judicially considered *de novo*, but it is said that the ordinary rule that findings of an administrative tribunal must be accepted, if supported by substantial evidence, must control the decision here on the facts. In our view this contention is not applicable to the present case. Section 23 does not provide for a 'hearing' by the Commission when a declaration of intention to build a dam is filed, but only for an 'investigation' by the Commission. Nor does the Act provide for any judicial review of the findings made. Nor is this case a statutory proceeding by way of appeal from or review of the Commission's action. Assuming that the finding of the

Commission is a relevant fact for the consideration of the court, and that it is entitled to careful and respectful consideration as the opinion of a body informed by experience, nevertheless it cannot properly be regarded as controlling judicial determination on the record in the case. Clearly the decision of the district court involved a constitutional question of the jurisdiction of the Commission in relation to the distribution of state and federal power, and of riparian property rights of the defendant. This, we understand, is not disputed so far as the action of the district court was invoked under the Rivers and Harbors Act; and it seems equally clear that the same must be true with respect to any jurisdiction of the Commission in this case. In that view it is clear that the district judge was required to determine the question of fact *de novo* on the record made at the trial before him. Crowell v. Benson, 285 U.S. 22, 58, 59, 52 S.Ct. 285, 76 L.Ed. 598; St. Joseph Stock Yards Co. v. United States, 298 U.S. 38, 51, 56 S.Ct. 720, 80 L.Ed. 1033; Baltimore O. R. Co. v. United States, 298 U.S. 349, 364, 56 S.Ct. 797, 80 L.Ed. 1209."

The decision of the Fourth Circuit in the above case finding the New River not to be a navigable stream of the the United States was later reversed by the United States Supreme Court in 311 U.S. 377. The Government did not, however, in that case seek to have the court pass on the contention that the findings of the Power Commission should be conclusive if supported by substantial evidence and that proposition did not enter into the Court's decision. Therefore, I feel bound in the instant case by the principles enunciated by the Fourth Circuit in *Appalachian, supra,* as to the findings of the Federal Power Commission concerning the navigability of the Seneca-Keowee River. At most the Commission's findings as to navigability would constitute some evidence to be considered by the Commission and the court in determining whether or not the Seneca was in fact navigable.

The Government contends that the evidence in the record, which has been briefly referred to herein, conclusively establishes that the Seneca was actually used for navigation in historic times; and that it was also suitable for additional improvement for navigation. It further contends that efforts by the State of South Carolina to improve or make the Seneca River a navigable stream dedicated the river to interstate commerce. Finally, it argues that the Commission adopted an erroneous test of "useful commerce" in making the determination that the Seneca-Keowee River was not a navigable stream of the United States.

It is true that there was considerable discussion and planning on the State level as to effectuating improvements on the Seneca-Keowee River with the view of making the stream an useful artery of interstate commerce, particularly during the period 1808-1830 referred to by the historians as the "internal improvements period." The record also reflects that there were instances where boats descended the river down to Andersonville at the mouth of the Savannah River; however, the first report to the legislature in 1820 (set out in part above), after formation of a commission to study and make recommendations concerning improvements to make the Keowee-Seneca River navigable, reveals that state officials considered the necessary improvements to Portman Shoals too expensive considering the extent of navigation above these shoals.

Subsequent to this report efforts were made by Colonel Blanding to have the Lawrence Brothers and Bowman sluice Portman Shoals following his 1823 survey; however, this attempt was unsuccessful as documented by the report in 1829 of Whitner, Colonel Blanding's successor, which reported that useful navigation of the river could only be accomplished by making further improvements at Portman Shoals.

It is my conclusion that the reports made to the legislature in 1820 and 1829 show that it was doubtful in the beginning of the "improvements era" that the Seneca could

ever be made navigable for useful interestate commerce at a cost commensurate with need; and in spite of the statements by various individuals that the river was navigable, the last report in 1829 by Whitner shows that efforts to make the river navigable to ascending and descending boat traffic had failed, and that any improvements made at Portman Shoals had failed to open the river to useful interstate commerce. I cannot agree with Government's contention that efforts by the State during this period resulted in a "dedication" of the river to interestate commerce. Had the State succeeded in improving the stream so as to make it navigable for useful commerce, then the situation would be different. Once a stream becomes "navigable" it retains that status, but here the efforts of the State obviously failed. All of these facts were fully considered by the Commission.

Of course, as aforesaid, the crucial test in determining navigability is not the actual commercial use of a river, or the absence of use. It is the susceptibility of the river for "useful interstate commerce" in its natural state or with reasonable improvements dictated by cost and need. *United States* v. *Appalachian Power Co., supra.* The Supreme Court has also asserted that use of a river by private boats may "demonstrate the availability of the stream for the simpler types of commercial navigation." *United States* v. *Appalachian, supra. United States* v. *Utah,* 283 U.S. 64 [1931].

The evidence in this case verifies that there had been some limited boat traffic on the river, and that it could in its natural state accommodate small flat boats. However, the only instances of trade and commerce carried on by boat were intrastate rather than interstate. Furthermore, the evidence indicates that the river was susceptible to having been made navigable at great cost by a system of locks and canals; but that the need definitely did not justify the cost during any period of history, prior to the coming of the railroad to the Piedmont, or thereafter to date of the development of the Hartwell Project. It is therefore my judgment that the cost of making the Seneca navigable in

the legal sense, and a useful artery of commerce was so out of proportion to the use and benefits to be derived therefrom by the public that it was not reasonable or practicable to undertake such improvements.

It appears from the record that all of the witnesses, including those of the Government reached the same conclusion.

The Government contends, however, that even if the Seneca River is not a navigable stream, the flow of the stream is subject to the power of the United States arising under the Commerce Clause of the Constitution, because it is essential to the navigability of the Savannah River. There was no proof in the record that the hydroelectric facility operated by Duke Power Company at Portman Shoals in any way ever affected the navigability of the Savannah River. Indeed, the only evidence presented showed that the Duke operation did not influence the flow of the Savannah in any manner. The Government argues, however, that if Duke had any right to maintain a dam on the river it could possibly have built a bigger dam, dredged out the river, etc., and thereby possibly affected the flow of the Seneca and in turn the Savannah. This court is bound by existing facts and cannot speculate and conjecture as to possible ways the Duke project under different circumstances may have affected the flow or navigability of the Savannah River. As it existed it had no influence on the Savannah, and consequently the United States had no greater interest in this non-navigable stream at the site of Portman Shoals than did the landowner. *United States v. Gross*, 243 U.S. 316 [1917].

I conclude in accordance with the above findings that the United States has no paramount rights to the flow of the Seneca River; and that, therefore, Duke Power Company is entitled to be compensated for its properties, which have been inundated and made useless by waters impounded by the Hartwell Dam project located on the Savannah River.

The Commission in this case was composed of three able and outstanding members of the South Carolina Bar. It is clear that the correct legal standards were applied by

them to the facts in the case regarding the navigability of the Seneca River; that its findings and conclusions in this regard were not clearly erroneous, but firmly supported by substantial evidence. Furthermore, as before stated, I have made an independent study and appraisal of the evidence, and have reached conclusions of fact and law as stated herein. Inasmuch as the findings of fact and conclusions of law reached by the Commission are in accord with my own findings, and supported abundantly by the evidence, they are hereby adopted and confirmed by this court.

Having concluded that Duke Power Company is entitled to just compensation for the taking of its hydroelectric facility, as well as its land, the court will now consider the Government's objections to the basis of the award and the amount of compensation found by the Commission. The findings of facts as to just compensation by the Commission must be accepted by the court unless clearly erroneous, and in the absence of manifest error, in accordance with Rule 53(e)(2) of the Federal Rules of Civil Procedure, made applicable here by Rule 71A(h), 28 U.S.C.A. *United States* v. *Carroll*, 304 F.2d 300 (4th Cir. 1962); *United States* v. *Certain Interests in Property, etc.* 296 F.2d 264 (4th Cir. 1961); *Cunningham* v. *United States*, 270 F.2d 545 (4th Cir. 1959), cert. den. 362 U.S. 989 (1960).

The Government insists that the Commission erred (a) in not accepting the testimony of one of the Government's witnesses as to the value of the land taken; and (b) in concluding that the fair market value of newly created lake properties was too uncertain and speculative to be of probative value. As pointed out in the Commission's report, Witness Honnold relied upon by the Government to value the enhancement of the landowner's property around the newly created lake testified as to his knowledge of only one "acreage sale" of property bordering on the lake. The Commission correctly concluded that such testimony had little probative value in ascertaining the true extent of the increase in value of the landowner's property bordering on the lake and of the "back" properties. Indeed, the testimony of the Government's witness shows that property

values around the lake were very unstable, had no well established market value at that time, and that better informed property owners quite adroitly were "holding" their lands until values did stabilize.

The question then remaining is whether the Commission's award of $37,500.00 as compensation for the total 503.7 acres taken by the Government based on a fair market value of $75.00 per acre is clearly erroneous? It should be noted here that witnesses for the landowner valued the property at the time of taking at $100.00 and $95.00 per acre. In valuing land taking in condemnation proceedings, landowner is not limited to value based upon its present use, but is entitled to be paid for the highest and best use to which such lands can be put within the reasonably foreseeable future. *United States* v. *Carroll, supra.*

The Commission's award is well within the range of the testimony of the witnesses, and is, indeed, substantially less than the value of the land attested to by landowner's witnesses. It is also noted that the values arrived at by the Government's witness for the 503.7 acres as of the date of taking, including the value of potential industrial sites within the acreage, was between $37,500.00 and $39,000.00. The Commission correctly concluded that value for potential industrial sites at the time of taking should be considered in making a final award.

Considering the Commission's report in light of the principles set forth in *Carroll, supra*, and the authorities cited therein, this court cannot say that the Commission's findings as to the value of the land taken are clearly erroneous; and consequently plaintiff's objections on this issue are overruled.

The Government also objects to the amount of the award of $500,000.00 by the Commission for the taking of the owner's hydroelectric facility, and to the method of evaluation used by the Commission. Specifically the Government excepts to the Commission's findings that the power facility had a useful remaining life of 20 years and to the Commission's measure of value e.g., the value of the plant to the Duke System.

The Commission rejected the "reproduction cost less depreciation, substitute facility", and "comparable sales" methods of evaluating the property, and arrived at its just compensation based upon the "capitalization of income" method, which it found to be more realistic under the circumstances of this case.

The Commission's selection of a capitalization rate of interest in excess of 6% in determining value of a 20 year remaining economic life has support in the record. The expert testimony estimated: (a) The annual average net income of Duke from its facilities from $47,350.00 to $53,200.00; (b) economic life from 15 to 30 years; (c) capitalization rate from 5.5% to 12%; and (d) value as capitalized from $362,000.00 to $789,000.00.

Valuation based upon "replacement cost less depreciation" method ranged from $662,000.00 to $953,000.00, and upon "substitute facility" method from $304,000.00 to $682,000.00. There is little difference in the opinion evidence as to estimated net average annual income of defendant from said power facilities; and the $50,000.00 figure used by the Commission is reasonable and fully supported by the testimony. "Capitalization of income" is a proper method of evaluating the property here; there being no readily obtainable comparable sales; and the "reproduction cost" approach is unwarranted in view of the obsolescence of the facilities in question. However, the Government argues that the interest rate and remaining economic life chosen by Commission to apply to the income are erroneous and without sufficient foundation in the record. With this, I cannot agree.

The Commission in its report has made full findings of fact which are amply supported by the evidence, and has applied correct legal principles to these facts. The Commission determined that Government's witness was off base in his judgment in assigning a low 15-year economic life to the facility, a high 12% capitalization rate, and a low firm capacity. The Commission also found that the true value of the plant to the entire Duke system should be given consideration in determining just compensation for the taking

of the facility. The Government's approach to evaluation, straight income approach, did not take into consideration the loss of the transmission lines connected with the plant as a separate item; this factor was considered as an inherent part of the income producing facility, not a separate compensable item. In its consideration of the value of the entire facility to Duke's integrated power system, the Commission concluded that these lines were as important as the dam and power plant; and considered their replacement value, less depreciation, in the total award for the taking of the power facility.

The Government valued the power plant at $362,000 without considering the transmission lines. The Commission determined the transmission lines to be worth $88,000.00, and considered their value in its total award of $500,000.00. It is quite apparent from the record that in general the Commission and the Government followed similar methods in evaluation of property, with the Commission refusing to accept several "judgment figures" relied upon by the Government. The Commission's findings are substantially supported by the evidence presented by both sides. It employed a sound and reasonable method in ascertaining the value of the plant to the owner, when "comparable sales" value could not be readily determined; and "replacement-less-depreciation" and "substitute facility" methods were not practicable in view of the age of Duke's existing facilities.

The findings and conclusions of the Commission with respect to the values of the land taken, and the dam and hydroelectric plant, are strongly supported by the evidence. Therefore, the Government's objections to the findings and conclusions pertaining to value and method of evaluation of these properties are overruled; and the report of the Commission is ratified and confirmed in full.

It Is Ordered that title to the lands described in the amended complaint is vested absolutely in the United States of America; that just compensation for the taking of the 503.7 acres of land is $37,775.00; that just compensation for the taking of the dam, hydroelectric plant, and transmission lines is $500,000.00, less the value of the equipment

salvaged, $9,627.00, making total just compensation to Duke Power Company of Five Hundred Twenty-eight Thousand, One Hundred And Forty-eight Dollars ($528,148.00), with interest from the date of taking, December 9, 1960, at the rate of 6 percent per annum.

IT IS FURTHER ORDERED that upon deposit by the United States of America of the sum of Five Hundred Twenty-eight Thousand, One Hundred and Forty-eight Dollars ($528,148.00), with interest at the rate of 6 percent per annum from December 9, 1960, the Clerk of this Court shall issue a Registry Fund check payable to Duke Power Company for all deposits by the United States of America for the taking of said property.

CHARLES E. SIMONS, JR.,
United States District Judge

Charleston, S. C., July 30, 1965.

APPENDIX C—REPORT OF COMMISSION

C/A No. 2814

TRACT No. W-2300

(PORTMAN DAM)

REPORT OF COMMISSION UNDER CONDEMNATION PROCEEDINGS, HARTWELL DAM PROJECT

(Filed December 31, 1963)

Name of Landowner: Duke Power Company
Date of Taking: December 9, 1960
Estate Taken: 503.7 acres
(133.8 acres in reservoir)

Award:	a. Lands	$ 37,775.00
	b. Hydroelectric Plant	500,000.00
	Less Salvage	−9,627.00
	Total	$528,158.00

Dates and Places of Trial:

Pretrial	Anderson	April 11, 1962
Trial	Anderson	January 14–17, 1963
Arguments	Columbia	June 21, 1963
Conference	Spartanburg	August 30, 1963

BEFORE: AUGUSTUS T. GRAYDON, Chairman, GEORGE P. CALLISON, J. DAVIS KERR, Commissioners.

APPEARANCES:

John C. Williams, Esq., United States Attorney for the Western District of South Carolina, Robert DuPre, Esq., Assistant United States Attorney, Greenville, Charles S. Porter, Esq., Assistant United States Attorney, Greenville, Howard O. Sigmond, Esq., Attorney, Department of Justice, Washington, D. C., W. R. King, Esq., Attorney, Corps of Engineers, Savannah, Georgia, William H. Young, Jr., Esq., Attorney, Corps of Engineers, Savannah, Georgia, FOR THE UNITED STATES.

T. Frank Watkins, Esq., William Law Watkins, Esq., David L. Freeman, Esq., of Watkins, Vandiver, Freeman and Kirven, Anderson, William Era Ward, Esq., Attorney, Duke Power Company, Charlotte, (1) North Carolina, FOR THE LANDOWNER.

BEFORE: Augustus T. Graydon, Chairman. George P. Callison, J. Davis Kerr, Commissioners.

To: The Honorable C. C. Wyche, United States District Judge for the Western District of South Carolina.

I. General

This case involves the value of property of the Duke Power Company at or near Portman Shoals on the Seneca River in Anderson County, South Carolina. These lands were taken by the United States as a part of Hartwell Dam project on the Savannah River.

The entire tract (including 106.4 acres in the river bed) contained 954.7 acres; the tract had been acquired by Duke's predecessor for the purpose of constructing a hydroelectric dam and power plant there in 1898; this was one of the first hydroelectric plants in this area and gave to Anderson its name of "The Electric City."

Following the decision of the United States Supreme Court in *United States* v. *Twin City Power Company,* 350 U.S. 222, 76 S. Ct. 259, 100 L. Ed. 240, the Government has taken the position that Duke is entitled to no compensation for hydroelectric values: this contention applies to the dam, powerhouse and certain transmission lines from the hydroelectric plant, all of which were in operation up to the date of taking when the powerhouse was flooded by the rising waters of Hartwell Reservoir.

a. *Owner of the Tract*

Duke Power Company, a North Carolina utility which has extensive power facilities in the two Carolinas, has owned the plant since 1913. During the years (and prior to acquisition of the plant by Duke) some improvements had been made in the plant and dam, but the basic design was fixed by the construction which had taken place in 1898.

The tract included not only the land but the powerhouse, the dam and a substation with transmission lines to Anderson—all of which were owned and operated by Duke Power Company.

Duke's predecessor had obtained permission to build the dam from the State of South Carolina, long before the

enactment of the Federal Power Act and the creation of the Federal Power Commission. No license could have been obtained from the federal government in 1898 had one been sought.

b. *The Date of Taking*

The Portman Shoals dam and powerhouse have been flooded by the construction of Hartwell Dam and reservoir on Savannah River. Apparently because of the doubtful status of the property, the United States did not condemn Duke's hydroelectric properties, but they were taken by physical appropriation when the rising waters of the Hartwell Reservoir flooded the powerhouse in December, 1960, and stopped all generation of electricity from the facility. The date of taking has been established as December 9, 1960.

Today the entire dam and powerhouse are submerged under the waters of Hartwell Lake and the plant which supplied power from its 52-foot head of water is no more.

c. *Reference to Commission*

This case, along with many others involving lands on the South Carolina side of the Savannah and Tugaloo rivers, was referred to this Commission under Rule 71A. The order directed this Commission to make broad Findings of Fact and Conclusions of Law, as well as full recommendations as to an award.

d. *Inspections; Location of Lands; Acreages*

Although these lands were under water when the trials were conducted, two members of the Commission (Graydon and Callison) had inspected the lands, the reservoir, the dam and the powerhouse in 1959 when other lands in this area were being tried.

Through various inspections the entire Commission is familiar with the types of lands involved in this condemnation; we are also familiar with the lands surrounding the area and still out of the Hartwell Lake.

These Duke lands were located on Seneca River about eight miles north of the junction of Seneca and Tugaloo rivers and about thirteen miles north of the Hartwell dam site; the original tract (954.7 acres) commenced at a point just below Portman Shoals, north of S. C. Highway 24. The 52-foot dam created a reservoir which only flooded 27.4 acres outside of the 106.4 acres in the river bed.

The highlands were therefore 820.9 acres; out of this acreage 503.7 acres, located on both sides of the river, were taken by the United States. The landowner (Duke) had remaining tracts of 317.2 acres as follows:

East Bank: 66 acres about ½ mile north of the dam
171 acres about 2 miles north of the dam

West Bank: 40 acres
22.9 acres
17.3 acres,

all about 1½ miles north of the dam. While some of Duke's holdings were away from the river and on high ground, the entire tract was obviously acquired as a part of the Portman Shoals facility.

e. *The Questions Involved*

As indicated at the outset, the question of navigability must first be determined. If the river is at this point a navigable stream, then Duke would not be entitled to compensation for hydroelectric values (i.e., for its dam, powerhouse, electric facilities and transmission lines). Duke has taken certain alternate positions, but these issues will only have to be met or can be passed over—depending upon the ruling as to navigability. (Section II)

After the issue of navigability has been determined, then the evaluation issues can be decided. (Section III) The Government concedes that Duke is entitled to payment for the acres outside of the Portman Shoals reservoir, and no attempt by either party has been made to ascribe hydro-

electric values to these acres which were above the water level of the Portman Shoals.

If the river is nonnavigable, then Duke is entitled to compensation for the taking of its hydroelectric facilities; the measure of those damages would be the cost of a substitute facility to take the place of the contribution made to Duke's power system by the Portman Shoals dam and powerhouse, or some other method of computing damages if the substitute facility approach is not applicable in this situation.

Finally the value of the transmission lines used for transmitting the Portman Shoals power must be dealt with; the parties have agreed that 25% of the value of these lines is attributable to transmission lines connected with Duke's transmission system to Townville.

In summary (Section IV) we will set out our Findings of Fact and Conclusions of Law and our recommendations to the Court as to an award.

f. *Conferences and Trial*

A pre-trial conference before the entire Commission was held on April 11, 1962, and the issues were clarified in this proceeding which is made a part of the record.

Two depositions were taken on the issue of navigability, and the testimony was taken in hearings conducted on all issues during the period from January 14 through 17, 1963, in Anderson. The entire record has been transcribed.

The issue as to navigability was also involved in a case referred to the same Commission, and testimony on that issue was taken in both cases simultaneously.

The companion case involves a waste disposal system used by J. P. Stevens and Company, Inc., in its textile plant upstream on Seneca River. That action is Civil Action No. 2788, *U.S. v. 531.13 Acres*, etc.; the companion action involved Tract Z-2621 and several easement tracts.

The reports have been written independently, but the same testimony as to navigability applies in both cases. The same conclusion as to navigability has been reached in each case.

II. The Issue of Navigability

Whether the Seneca-Keowee is a navigable stream is a mixed question of law and fact. The law applicable to this case is well settled; in the light of the legal principles which will be set out below, the factual determination as to the navigability of the Seneca-Keowee River must be decided.

The question of the federal navigability of a stream is all-important because a private landowner cannot have any ownership or property rights in such a navigable stream; the riparian landowner can use such a stream in common with other members of the public, but there can be no vested property rights which the landwner can assert against the *paramount servitude* of the United States.

After the legal principles under which the question of navigability must be decided have been discussed (a), we will then:

(b) Review the general background of internal water improvements in this area;
(c) Trace the history of navigation on the Savannah River and specifically on its tributary, the Seneca-Keowee River;
(d) Report the engineering, topographical and physical aspects of the Seneca-Keowee River, and
(e) Finally, state our findings and conclusions as to the navigability of the Seneca-Keowee River in a federal sense.

a. *Applicable Law on the Issue of Navigability*

The question of navigability in this case is a federal question which must be decided under legal principles set out in the decisions of federal courts. *United States* v. *State of Utah,* 283 U.S. 64, 75; 75 L.Ed. 844 (1931); *United States* v. *Holt State Bank,* 270 U.S. 49, 55-57; 70 L.Ed. 465 (1926). Each case must stand on its own facts, and the susceptibility of the river or stream for use as a highway of commerce is the crucial question.

While the extent of existing or present commerce is not the test, the vital and essential point is whether the natural navigation of the river is such that it now affords or has ever afforded a channel for useful commerce.

The test was set out in Daniel Ball, 10 Wall. (US) 557, 562, 19 L.Ed. 999, 1001, as follows:

> "Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water. And they constitute navigable waters of the United States within the meaning of the Acts of Congress, in contradistinction from the navigable waters of the States, when they form in their ordinary condition by themselves, or by uniting with other waters, a continued highway over which commerce is or may be carried on with other states or foreign countries, in the customary modes in which such commerce is conducted by water."

As the Court observed further in *Daniel Ball* in regard to certain obstructions in the Grand River between Grand Rapids and Grand Haven, Michigan:

> "The streams were in fact still 'united' in interstate use despite the obstruction and the Courts in every case recognized this, noting that the vital and essential point is whether the natural navigation of the river is such that it affords a channel for useful commerce.
>
> "Where, on the other hand, the obstructions are not in fact reasonably surmountable, the stream is not a navigable water of the United States, although it may be a navigable water of the state. Veazie, et al vs. Moor, 14 L.Ed. 545 (1852)."

In *The Montello*, 20 Wall. (U.S.) 430 (1874), the Supreme Court said at Page 441:

> "It would be a narrow rule to hold that in this country, unless a river was capable of being navigated by steam or sail vessels, it would not be treated as a public highway. The capability of use for purposes of transportation and commerce affords the true criterion of the navigability of a river, rather than the extent and manner of that use. . . ."

Thus if a river was generally and commonly useful to some purpose of trade or agriculture, the river would be deemed navigable. The fact that artificial means—such as portages, sluices, canals or locks—had to be employed to obtain the useful commerce would not preclude a finding of navigability in a federal sense—if the test of useful commerce is met. *Economy Light Co.* v. *United States*, 41 S.Ct. 409, 256 U.S. 113, 65 L.Ed. 847 (1921). And the fact that there had been no commercial use of a river for a century or more would not preclude a finding of navigability if the river had at any time been an artery of useful commerce. Once federal navigability is established, it cannot be abandoned except by an act of Congress.

But sporadic and ineffectual attempts at navigation are not enough; for as a district court said in a case upheld by the Supreme Court in *Brewer-Elliott Oil and Gas Co.* v. *U.S.*, 260 U.S. 77, 86, 67 L.Ed. 140, in regard to the non-navigability of the Arkansas River above the mouth of the Grand River in Oklahoma:

> "The use of that portion of the river for transportation boats has been exceptional and necessarily in high water, was found impractical and was abandoned. The rafting of logs has been attended with difficulties precluding utility. There was no practical susceptibility to use as a highway of trade or travel."

The most recent *landmark* case is *U.S.* v. *Appalachian Electric Power Company*, 311 U.S. 377, 85 L.Ed. 243 (1940). Whether the river is useful or not in its *natural condition* is the question which must be determined in establishing navigability; for as the court said in the Appalachian case at page 407:

> "'Natural and ordinary conditions' refers to volume of water, the gradience and the regularity of the flow. A waterway, otherwise suitable for navigation, is not barred from that classification merely because artificial aids must make the highway suitable for use before commercial navigation may be undertaken."

The *Appalachian* case involved a stretch of some 111 miles of the New River form Allisonia, Virginia, to Hinton, West Virginia. An upper and lower section of the river in this stretch had been improved by the United States between 1876 and 1883, and the navigation in these areas was quite extensive. Even in the middle section where improvements were needed to improve navigation, there was considerable commerce in this stretch. Judge Parker reviewed the detailed and extensive amount of this commerce in a dissenting opinion in 107 F.2d 769, 801.

The water flow of the New River above Radford (the stretch in question) was 3,211 cubic feet per second and the drainage area was 2,400 square miles. The flow rate of the river was one mile per hour in pool water and a maximum of 4.4 miles per hour in the channels of the falls and rapids.

In setting the test for the navigability for the New River, the Supreme Court said in this same case (*United States* v. *Appalachian Power Co.*, 311 U.S. 377, 85 L.Ed. 243, pages 253-254):

> "Improvements that may be entirely reasonable in a thickly populated, highly developed industrial region may have been entirely too costly for the same region

in the days of the pioneers. The changes in engineering practices or the coming of new industries with varying classes of freight may affect the type of the improvement. Although navigability to fix ownership of the river bed or riparian rights is determined as the cases just cited in the notes show, as of the formation of the Union in the original states or the admission to statehood of those formed later, navigability, for the purpose of the regulation of commerce, may later arise. An analogy is found in admiralty jurisdiction, which may be extended over places formerly nonnavigable. There has never been doubt that the navigability referred to in the cases was navigability despite the obstruction of falls, rapids, sand bars, carries or shifting currents. The plenary federal power over commerce must be able to develop with the needs of that commerce which is the reason for its existence. It cannot properly be said that the federal power over navigation is enlarged by the improvements to the waterways. It is merely that improvements make applicable to certain waterways the existing power over commerce. In determining the navigable character of the New River it is proper to consider the feasibility of interstate use after reasonable improvements which might be made.

"Nor is it necessary for navigability that the use should be continuous. The character of the region, its products and the difficulties or dangers of the navigation influence the regularity and extent of the use. Small traffic compared to the available commerce of the region is sufficient. Even absence of use over long periods of years, because of changed conditions, the coming of the railroad or improved highways does not affect the navigability of rivers in the constitutional sense. It is well recognized too that the navigability may be of a substantial part only of the waterway in question. Of course, these evidences of nonnavigability in whole or in part are to be appraised in totality to determine the effect of all."

On the New River, the improvements which had been made in the nineteenth century were abandoned and the provision for these improvements had been repealed in 1902. In 1912 the Corps of Engineers had advised against the undertaking of further improvements—on the basis that they were now no longer economically feasible. But the Supreme Court held the river to be navigable *because the navigable character of the stream had once been established.*

The rule as to navigability has been well summarized in plaintiff's brief:

> "—the vital and essential point is whether the natural navigation of the river is such that it affords a channel for useful commerce. If this be so the river is navigable in fact, although its navigation may be encompassed with difficulties by reason of natural barriers."

The cases which have been involved on this question are numerous: in this case there can be no question but that Duke was using the water power or flow of the stream. If the United States had a paramount servitude in the stream for this water power or flow, then Duke is entitled to no compensation for the loss of its hydroelectric facility; this is so because if the government had a paramount or usurping right in the water power or flow of the stream, no other party—be it the State, an electric utility, a private company or an individual—had any property right in that flow of the stream which could be assorted against the United States.

The United States has taken the further position that if the stream is nonnavigable, then this dominant servitude extends to all tributaries of navigable streams—even though these tributaries are themselves nonnavigable.

We will dispose of that issue before discussing the navigability of the stream: there was no showing here that the defendant's use of the stream had any material effect on navigation, flood control or other related federal purposes

in the development of the Savannah River basin. In fact, the only testimony on this point showed that the Portman Shoals dam and reservoir had an inappreciable effect on the flow of the Savannah River. (Record, W-2300, page 491). Even just below the dam, the effect was negligible.

Certainly the paramount servitude cannot be extended to tributaries and sources which have no connection with any federal aspect of the navigable stream. For if this were not so, the servitude would go to every ultimate source of a navigable stream and the legal concept of nonnavigability would be of no effect.

The federal licensing power can be extended to tributaries which materially affect a flood control project; so also the power would extend to a stream the control of the flow of which would affect navigability. But none of these situations is present here.

Thus the question before us is one of federal navigability as opposed to nonnavigability. On that factual finding—made in the light of the legal principles cited hereinabove—this aspect of the case must be determined.

For as the courts have observed in numerous cases, the question of navigability is ultimately an issue of fact. There are many facets to be explored in determining the issue with reference to any body of water:

(1) Historical sources as relating to river traffic;
(2) Legislative action dealing with development of the river;
(3) Commercial activity on the river;
(4) The economy of the area as related to the river;
(5) Development of competing forms of transportation;
(6) Topography and physical characteristics of the river; and,
(7) Hydraulic and engineering factors.

b. *The American Dream of Water Commerce*

Water commerce was the dream upon which the colonies and later the young republic placed hope for economic development; the Roman and British empires were built on the factors of sea traffic. Before the development of the railroad, the rivers with interlocking systems of canals were the traffic arteries upon which commerce in the interior was built. In Europe, the Rhine was the great artery.

New Orleans surpassed Charleston and became one of the great ports of America because of river traffic. Memphis, St. Louis, Louisville, Cincinnati—they are all river towns. Today Cleveland, Detroit, Chicago and Duluth are "seaports" as a result of the development of the St. Lawrence River Seaway.

But in every river system, there must be a point beyond which the reasonable concept of federal navigability cannot be extended. The Savannah River, with the port city of Savannah near its mouth, developed to some extent as did the other rivers of the various South Atlantic states.

But the history of settlement of these Piedmont areas demonstrates the navigational difficulties inherent in the rivers which penetrated the up-country. Around Charleston and Savannah a planter society had emerged with few indentured servants and few independent white laborers. The settlers for what is now Piedmont South Carolina came from Virginia and Pennsylvania, but the area remained rather sparsely settled until railroad expansion brought a stable means of transportation upon which larger populations could depend. See: "Human Geography of the South," by Rupert Vance, Chapel Hill, pps. 450-456.

There had been river navigation in Piedmont South Carolina commensurate with the development of that area prior to the advent of the railroad which came to South Carolina in the year the internal navigation development ended, 1830. The fact that the traffic moved was comparatively small would not destroy the historical concept of navigability; once established, navigation in fact persists.

It is true that many southern streams now regarded as nonnavigable were at one time used for navigation to some extent, for this entire area developed as a coastal and river-bank civilization. The early headwaters of navigation—Augusta, Granby (Columbia), Camden and Cheraw—became distribution points, and areas beyond these fall-line points had to await a more stable form of transportation for urban development. The Atlanta of "Gone-With-the-Wind" (1864) was only an emerging railroad center when it was burned by Sherman.

But development of the rivers of Piedmont South Carolina was attempted and in many instances effected in the era when river and canal transportation was regarded as the key to interior development. In many instances the natural resources, topography and economic development of the upper coastal plains and Piedmont plateau areas did not warrant the costs of canal-and-lock developments on those rivers, and the sluicing operations which were attempted as a means of avoiding shoals were often not suited to realistic river transportation.

Some streams were made navigable by great efforts and tremendous expenditures, and navigation took place on the Saluda and Broad rivers above Columbia, on the Wateree-Catawba above Camden and on the Savannah above Augusta as far as Andersonville. The navigation on these streams was sufficient for these rivers to acquire an undoubted navigable status and therefore these streams became subject to the federal navigation servitude.

But there must be a point at which the status of federal navigability ends, for assuredly the imaginative dream of Robert Mills for a canal connecting South Carolina's rivers with the Mississippi across the Appalachian range does not make the streams and falls of the mountain areas envisioned by his scheme navigable.

The test as to navigability must be assessed in the light of historical facts. All too often the student of history regards official documents and statutes as conclusive evidence of historical events. But to contemporary documents the usual tests of reliability and objectivity must be applied.

For 150 years ago—as today—the concept of "managed news" was not unknown, and the author of a particular report often depicted the events as he desired them rather than in accordance with the facts of the situation.

Such inaccuracies were particularly true of reports on the frontier areas of which those in the government knew so little. Actual conditions were often at great variance with reported conditions; it was as difficult for the government official in Charleston or Columbia to realize the conditions and actual situations in frontier areas as it is for the descendants of these frontiersmen to realize that these very ancestors would be most uncomfortable in the descendants' parlors.

The question of navigation on rivers in upper South Carolina has its origin in factors which arose millions of years ago; for the fall line divides South Carolina into two divergent and contrasting areas. This line marks the former coastal area of the state; below that line—which runs from Augusta through Aiken, Columbia, Camden and Cheraw—is the alluvial coastal plain, ranging in width from 100 to 150 miles.

Above the fall line is the Piedmont, or "foot of the hills": an area of rolling hills, swift streams, frequent rock outcroppings and red clay. The character of the lands is entirely different; in the fall line area the red clay, which predominates throughout the Piedmont, disappears and its place is taken by sand in which the fossilized shells of an ancient sea can still be found. Below the fall line the soils vary from sandy loam to black muck.

So too the streams and rivers of the two areas vary greatly; above the fall line there are in all rivers frequent shoals and outcroppings of granite rock. The courses of these swift streams are fairly straight and direct. Below the fall line, the rivers become sluggish and meandering. The streams which fall 1,000 feet or more in the area stretching from the mountains to the fall line fall about 150 feet in the long distance from the fall line to tidewater.

David Duncan Wallace, recognized historical authority in South Carolina, says in Volume II of "The History of

South Carolina," at page 398, in speaking of the era from 1800 to 1835:

> "Near the coast an intricate system of fresh water streams and deep tidal 'creeks' and 'rivers' affords almost perfect means of transportation from plantation to market. River frontage for all land grants possible was insisted upon by early regulation; and only when the available amount was exhausted did settlers submit to living away from these natural highways. The rivers between the fall line and the coastal region are fairly suited for navigation, but above the line they are either swift or so broken by shoals and shallows as to be dangerous for downward and all but impossible for upward voyages . . ."

As Wallace observes, the "canal enthusiasm, seeking to render the entire river system of the State available for transportation, raged from 1791 to about 1825." And as Wallace says further: "The pathetic faith as to possibilities of fleets on rivers that a child could wade for months during the year became a public delusion." (Wallace, "The History of South Carolina," Volume II, p. 399)

Robert Mills envisioned a series of canals connecting with the Mississippi, Hudson Bay and the Columbia River in the Far West. But many of the rivers above the fall line were unsuited to navigation, and the poor roads were often better than the uncertain and precarious navigation. The railroad's advent spelled a final end to many grandiose plans for navigation.

Although the legislature in 1828 heard a report on the sluicing of the Saluda River for 140 miles, the Broad and Pacolet Rivers for 110 miles and the Seneca for 30 miles from Andersonville to Pendleton Old Courthouse, the system was never a functioning reality of more than 2,000 miles in river channels; in fact, although $2,000,000 had been spent by that year, the system was almost entirely abandoned because of the failure of results.

Charleston, rather than profiting from the internal navigation improvements, had declined; the port revenues in

1815-18 had averaged $1,407,058.22, while during the seven-year period, 1819-1825, these collections averaged $679,712.79. (Mills' *Statistics*. 1826. p. 168) Thus it is apparent that the glowing promise for internal navigation in its "period of flower" was a great disappointment. See "Centennial History of the South Carolina Railroad," Samuel M. Derrick, The State Company, 1930, Chapter I, pages 1-10.

But the question before us is not the general status of streams in South Carolina, but the specific status of the Savannah and its tributary, the Seneca-Keowee.

c. *The Savannah River and the Seneca-Keowee River*

The Savannah River and its tributaries form one of the principal river basins of this South Atlantic coastal region; the mouth of the river is below the port of Savannah, which is located on the southwest side of the river.

The Savannah River system originates in the Blue Ridge Mountains of Georgia and North Carolina; its two principal tributaries are the Tugaloo-Chattanooga, which continues the boundary between South Carolina and Georgia, and the Seneca-Keowee, which is the river with which this case is concerned.

The Seneca-Keowee is formed from the Horsepasture, Toxaway, Thompson and Whitewater rivers which arise in Jackson and Transylvania counties in the Blue Ridge Mountains of North Carolina. These rivers flow into the northwestern part of South Carolina to form the Keowee River.

The significant river miles below the point at which the Keowee is formed are as follows:

River Mile	Point
353	Formation of Keowee by junction of Toxaway and Whitewater rivers
324	Formation of Seneca at junction of Twelve Mile Creek and Keowee river
322	Clemson College
319.5	Cherry's Bridge—J. P. Stevens plant
305	Portman Shoals Dam
297	Formation of Savannah at junction of Seneca and Tugaloo Rivers
292	Hartwell Dam
254.6	Broad River (Clark Hill)
201	Augusta
0	Savannah Port (Tybee Light)

The history of the Savannah and more particularly the Seneca-Keowee was presented by the United States and by the landowner. The "historical witness" for the United States was Dr. Gustavus G. Williamson, Jr., Associate Professor of Economics at the University of South Carolina; a deposition was taken because of the fact that the witness was leaving for a year abroad in connection with his professional work.

The witness for the landowner was also from the staff of the University of South Carolina: Dr. Daniel W. Hollis, Professor of History. (Record, W-2300, pages 393-476)

Both of these witnesses are scholars of recognized ability, and yet one of them concluded that there was evidence of navigability on the Seneca-Keowee during the early nineteenth century, while the other concluded that there had never been any economically useful navigation on this river.

It is not here a question of credibility of witnesses, for it is obvious that each witness believed his view to be correct: the difference lies in the interpretation given to the available historical documents and sources. And, in the case of Dr. Hollis, there was some historical material which was not considered by Dr. Williamson.

The general history of the area, known in Colonial times as the Old Pendleton District, was traced by Dr. Hollis (Record, W-2300, page 399 ff.)

(1) *Colonial-Revolutionary Era* (1750-1800)

Although the Piedmont settlement began in the period from 1750 to 1760, this area was occupied by the Indians until sometime after the Revolution; Fort Prince George, on the Keowee, had been established in 1753. Fort Charlotte was established on the Savannah above Augusta and another fort was built opposite Augusta. But there were only trails in use in the Seneca-Keowee area in these times, and goods were hauled by wagon and oxcart. This situation persisted until well after the Revolution, and few goods were hauled by boat even in the areas below the fall line in this period.

(2) *Early Federal-Nationalist Era* (1800-1830)

The Federal government and the states embarked during this period on numerous projects for the building of internal transportation improvements—including canals, some roads and river improvements. The program reached its climax in South Carolina in the decade from 1818 to 1828. Although more than $2,000,000 was expended on the program in South Carolina, Dr. Hollis described it as a failure; these expenditures were completely and finally stopped in 1829. The view that the entire navigation system in South Carolina was a failure is confirmed by such contemporary observers as William Gregg, the industrialist; John Belton O'Neal, the lawyer, and Joel Roberts Poinsett, a member of the Board of Public Works.

In his book, *A History of Transportation in the Eastern Cotton Belt to 1860,* Professor Ulrich B. Phillips, a recognized authority in the field of transportation history, says:

> "As we have seen above, the river navigation, in all cases concerning the eastern cotton belt, reached only to the edge of the Piedmont Country. Water transportation within the uplands was difficult and dangerous down-stream, and up-stream impossible."

As to the Savannah itself, Professor Phillips said:

> "In effect, however, the upper courses of the Savannah by reason of rapid descent, frequent heavy freshets —was not capable of being rendered safely navigable at any reasonable cost."

Dr. Hollis said that there was no reason in his opinion to infer that this statement applied only to steam navigation. (W-2300, p. 427)

In Drayton's *A View of South Carolina,* published in 1802, reference is made to navigation on the Savannah 60 miles above Augusta to Vienna, but navigation on up the river to Andersonville was only being contemplated. In 1810

John Lambert, the distinguished naturalist, was still making statements about the contemplated navigation on the upper reaches of the Savannah.

In an 1819 statute, the South Carolina Board of Public Works was directed "to render navigable Savannah River from Augusta to the confluence of the Tugaloo and Keowee, and the Keowee as far as they may deem expedient."

As a result of the 1819 statutory directive, a survey was made of the Seneca-Keowee (referred to at that time exclusively as the Keowee) and this report was made in 1820: (W-2300, p. 438-439)

> "An examination of the principal shoals of the Keowee River was made during the summer. Portman Shoals, where the river falls fifty-two feet and a half in two miles, present a serious obstacle to the improvement of this river. The fall is too great to be overcome by opening channels in the bed of the river, and the face of the country near the banks, is so broken and precipitous as to render any improvement by a canal and locks a very expensive undertaking, not warranted by the extent of navigation above these shoals."

An 1821 petition by residents of the area sought to make the river navigable, and among the signers was Edward Darrel Smith, M.D., who in 1808 had reported the Seneca-Keowee to be navigable. This was one of several such petitions.

It was after this 1820 report and petitions from local residents that in 1824-25 the Superintendent of Public Works, Abram Blanding, personally negotiated two contracts for the sluicing of the shoals for $5,953.50, one with the Lawrences and the other with Bowman, but in an 1828 statute the Superintendent of Public Works was asked "to enforce the contracts entered into with the Superintendent, respecting the navigation of Saluda and Seneca Rivers—"

Pursuant to this legislative directive, Benjamin F. Whitner, newly appointed Superintendent of Public Works, visited the Seneca-Keowee; Whitner reported that he di-

rected the Lawrences to do additional work on the shoals "before taking any other steps," and, although Bowman's contract had been cancelled, he obtained Bowman's promise also to perform some additional work. In both instances the work did not materially alter the sluices originally planned.

Whitner then goes on to say (1829):

> "The river has been greatly improved by the work done on it, but in some instances the benefit is confined solely to the descending trade, for in rendering that less dangerous, the ascending navigation has been made more difficult. The great obstacle is Portman's Shoals, where, in one instance, the fall is upwards of six feet in about one hundred yards. In such a place, a straight sluice is necessary to enable boats to descend with safety, while a more winding course, by lengthening out and breaking the force of the fall, is just as necessary for ascending. This navigation therefore can only be made to answer any very useful purpose, by having double sluices through the most difficult shoals."

And, according to Dr. Hollis, there was no evidence of any other work ever having been done on the river. (W-2300, p. 443)

(3) *The Railroad Development Era* (1830-1860)

In the period following 1830, railroad development began in South Carolina, but it was not until more than two decades had passed that the railroads penetrated the northwestern part of South Carolina through which the Seneca-Keowee river flows.

Despite the lack of adequate commercial transportation in this area, there is no evidence of any navigation of the river in this period when such transportation could have been useful. There is no evidence of portages around Portman Shoals at this or any other time. (Record, W-2300, p. 451)

(4) *The Past Century* (1860-1963)

In the period of the Civil War and down to the present, there was no evidence of navigation of the river other than the Russell-Lawrence boat which will be discussed below.

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These then were the principal sources relied on and analyzed by Dr. Hollis for the period when river navigation was being promoted and developed (1808-1828); Dr. Hollis also considered the various sources reviewed by Dr. Williamson. On the basis of these sources, Dr. Hollis concluded that in this period of river development the Seneca-Keowee did not become a navigable stream.

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For purpose of contrast, we will review the sources relied upon by Dr. Williamson in reaching his conclusions as to navigability; as we will see, the variances between these witnesses are greater in argument than in the record.

The map of Pendleton District in Mills' Atlas (1825), which includes the Seneca-Keowee River area, shows Portman's Shoal and another shoal about a mile up-stream at Pruet's Ford. (Plaintiff's Exhibit 1, Williamson deposition) That this shoal was well known is demonstrated by the source material in evidence; it is in the "Statistical View of Pendleton District, chiefly from the communications of Edward Darrell Smith, M.D." (as published in Ramsay's History of South Carolina, 1670-1898, pages 576-578, Plaintiff's Exhibit 2, Williiamson deposition) that this statement is found (1808):

> "The country (Pendleton District) abounds with large rocks which in some places obstruct the navigation of water courses, and form a natural pavement for crossing them. One of the most remarkable shoals, known by the name of Portman's, is in Keowee or Seneca River. These shoals are about four miles in length, and have been lately made navigable."

An 1811 statute, protecting the passage of fish up the Keowee River, excepts dams or obstructions made for "the boat sluice through the shoals of said river." (Plaintiff's Exhibit 6, Williamson deposition) No reference is made in the statute to the location or character of the sluice, and the statute was repealed as it related to mills and mill dams in 1853. (Plaintiff's Exhibit 7, Williamson deposition)

In *Mills' Statistics,* published in 1826, Mills described the Seneca as being navigable for "twenty-six miles, or six miles above Pendleton court house," and states that the Keowee is "capable of being made navigable entirely within the mountains, by merely sluicing." (Plaintiff's Exhibit 3, Williamson deposition) The 1818 Report of The State Engineer reports the Keowee, "obstructed by some rapids and shoals," to be "navigable for boats drawing two or three feet of water during the rainy season." (Plaintiff's Exhibit 4, Williamson deposition)

An 1824 report by the Superintendent of Public Works (Abram Blanding) shows that the sluicing operation was undertaken on the Seneca-Keowee in the years 1824-25; out of an appropriation of $6,000, all but $46.50 was spent in the program. (Plaintiff's Exhibit 5, Williamson deposition) Blanding in this 1824 report describes the "Senneca" as "capable of being rendered navigable into the very heart of Pendleton district" and says that Portman's Shoals was the "one difficult shoal in the distance of nearly 30 miles."

But Blanding adds this comment on the Seneca operation:

> "Whether an ascending sluice navigation can be effected here is a little doubtful, but boats carrying 40 or 50 bales of cotton, have descended over the shoals from the mouth of Twelve Mile creek, and can do so with ease when there is only common winter water."

The report was made as a part of a proposal for a bi-state improvement of Savannah River, and Blanding observes that, if the Savannah's navigation is perfected by the proposal, "it may be important that Portman's shoals should be overcome by a canal and locks." (Plaintiff's Exhibit 5, page 288, Williamson deposition)

In June, 1824, in connection with this work, Blanding made a survey of the Seneca-Keowee River and ascended the Seneca-Keoewee in an unloaded boat; he says that all shoals on the river were gradually and easily suiced "except at Portman's, which are about three miles long, rapid and much obstructed by rocks, formed in numerous ledges, crossing the stream."

Blanding said that his survey convinced him that the Portman Shoals could be sluiced more easily and safely than parts of the Savannah in which "advantageous navigation" was being pursued. Blanding, on behalf of the State, entered into the two contracts: one for $3,360 with James and Elisha Lawrence for sluicing the upper part of the shoals from Pickens' ferry, opposite Pendleton courthouse, to about three-fourths of the way through the shoals, and the other for $2,540 for the remainder of the shoals and the distance on into Andersonville. The upper limit of the improvements is interesting in the view of developments which will be discussed later in regard to Lawrence descendants.

Actually $3,033.50 was expended on this project in June and July of 1824 for advances on the contracts, and $2,000 more was paid in December, 1824, for work done under the contracts. A balance of $920 was paid in December, 1825.

These documents beginning with the 1808 report and ending with the 1824-25 contract are the principal bases for the assertion of navigability of the Seneca-Koewee by the United States; an 1847 letter from John C. Calhoun to James Edward Calhoun as "to the practicability of rendering the (Savannah) river capable of steam navigation" and an 1849 letter from a German group promoting settlement of an area near the Keowee and reporting the Keowee to be "navigable for any boats that go from Augusta to Andersonville" were the other documents relied upon. (Plaintiff's Exhibits 8 and 9, Williamson deposition)

These then are the primary sources upon which Dr. Williamson relied; Dr. Williamson reviewed the conclusion of Ulrich B. Phillips, the transportation historian, that "The upper course of the Savannah River could not be rendered

navigable at any reasonable cost"; Phillips' conclusion was based on the Calhoun letter in which a Mr. Sloan had reported that the navigation project could be accomplished only at "enormous cost"; Calhoun thought that Sloan was mistaken.

Williamson concluded that this Calhoun letter referred exclusively to steam navigation, and that the rivers (Savannah and Seneca-Keowee) had not been used more extensively because of the lack of economic development in the area; he said that the navigation development was commensnrate with agricultural and economic status of the area. He attributed the lack of further developments in navigation to the advent and expansion of the railroads in the area after 1850.

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The Lawrence Depositions

The other testimony of the United States on the issue of navigability of the Seneca-Keowee Rivers was contained in the depositions of David Elisha Lawrence and Charles R. Lawrence:

David Lawrence, who was born August 10, 1876, on Keowee River in Pickens County, related that his father, James Washington Lawrence, had built a boat for W. W. Russell for use in hauling crossties from Little River on the Keowee River to a trestle on the Seneca River at Cherry's Crossing below Clemson. The boat was 85 feet long, 8 feet wide and 2½ or 3 feet deep and could haul as many of 175 crossties weighing more than 150 pounds each. The boat had a crew of nine, with four polers on each side.

The furtherest distance negotiated by the Lawrence-Russell boat, which crossed three shoals in the area, was 12 miles. The boat ran in various operations, including the hauling of lumber after the crossties operation was completed, from 1889 until 1896 when it was carried away in a storm, according to Lawrence. This was the only boat on the river, but the witness said he had seen logging operations on the river during the same period.

All of these operations took place up the river from Portman Shoals, and the witness said that they had difficulty taking the boat through the three shoals going upstream, even though it was then unloaded. (Lawrence Deposition, pages 59-60) These three shoals were about a mile and a half in length.

Another and younger Lawrence, a cousin of David, said that he had been born on the Keowee, in 1884, and he recalled seeing the boat go up and down the river when he was a boy. (Lawrence deposition, pages 89-100) He also said that he had seen logging operation on the river, but he was never on the boat and knew nothing of its cargo, operation or course. One of the Lawrences attempted to relate stories about navigation as a part of the family history and tradition, but that testimony—not related to family matters—goes beyond the family hearsay exception which relates to purely family matters.

Other Witnesses on Navigation

Three witnesses for the landowner testified as to the history of the Seneca-Koewee River in this area from personal knowledge. These witnesses were:

F. T. Herring, born in 1884 in Fork Township near the Seneca River above Portman Shoals, said that he had never known of any boats or logging operations on the river although he remembers distinctly the construction of the Portman dam. He also said that he recalled no boat channels through the Portman shoals. The witness was not familiar with the river in the area used by the Lawrence boat.

T. R. Wright, who was born in Andersonville in 1881, said that the head of navigation on the Savannah River according to local reports was Andersonville. He said that he knew of no boats hauling anything on the Seneca River and that the only boats on that river were fishing bateaux. He said that he did know that there was no commerce on the river near where he lived but he had no knowledge of conditions at Portman Dam and above that area. He said

that he did recall pulling small boats over the shoals up the river from where he lived.

John M. McGill, who was born in 1877 one mile below Starr, said that he moved in the vicinity of Seneca River when he was two years old. The witness said that he remembered Portman Shoals prior to the construction of the dam. He said that he fished this area and recalled no sluices or other channels through the shoals which would permit the passage of a boat.

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That in summary is the historical record in this case on the issue of navigability. Only two periods are involved: 1808-1828, the era of internal improvement, and 1889-1896, the years during which the Lawrence boat was operated on a 12-mile stretch of the Seneca-Keowee.

Judged by the standard of "useful commerce," the historical evidence does not establish that the river was ever "navigabile in fact." The attempts to use the river were sporadic and exploratory in nature; those promoting the project envisioned a system of internal improvements, but the vision never became a reality. The reasons are apparent in the history of the area.

This area—now encompassing parts of Oconee, Pickens and Anderson counties—was described by Professor Williamson as "backward or isolated" in the early part of the nineteenth century; the area had a population of only 9,000 in the census of 1790 and its subsequent growth was slow.

As Professor Williamson observed in concluding his direct examinations, the development of the area did not justify the improvement of the Seneca River for use as a navigable stream. (Williamson's deposition, page 30) He cited a "lack of profit or the lack of likely results in terms of the development of the area" as the reason that the river was not used. (Williamson's deposition, page 31)

These two historians, both from the University of South Carolina, had ample qualifications in the field of historical research; they both had done extensive research in the

history of South Carolina. In many instances, they consulted the same secondary historical works, and they also in several instances reviewed the same primary sources.

But these experts have come to apparently opposite conclusions as to the navigability of the Seneca River: Dr. Williamson asserts that the river was developed for navigation in this period, while Dr. Hollis concludes that the Keowee-Seneca was never navigable. (Williamson deposition, pages 22 and 31, and Hollis, W-2300, page 452)

The historical sources show:

For the 1808-1828 period:

(1) That extensive promotional work was done, looking towards the improvement of the Seneca-Keowee for navigational purposes;

(2) That occasional trips were made on the river, but no regular commerce developed;

(3) That the economy of the area at that time did not warrant the development of the river as an artery of useful commerce.

For the 1889-1896 period:

(1) That a single flat-bottom boat was used during this period for the hauling of crossties and timber on a 12-mile stretch of the Seneca-Keowee above Portman Shoals;

(2) That this was solely *downstream* traffic for hauling goods, and the *upstream* trip was made in an empty boat through the three shoals in this area;

(3) That this traffic was not connected with river navigation downstream in the Savannah River and was entirely intrastate in character.

. . . . . .

The historical sources, interpreted in the light of the economic development of the area, show clearly that the Seneca-Keowee was never an arm of useful commerce. While the development of navigation was an early nineteenth century dream, the dream never became a reality.

Then, as now, the costs of development for useful traffic outweighed the economic benefits.

The sluicing which took place was not sufficient in scope or extent to provide a useful artery of commerce. The tests and research of the river from a topographical and engineering viewpoint confirming this conclusion.

d. *Engineering, Topographical and Physical Aspects of the River*

In addition to the historical sources and conclusions, a considerable amount of testimony was presented on twentieth century testings and calculations as to the navigability of the river.

Several witnesses testified in considerable detail as to the physical characteristics of the Seneca-Keowee river; that testimony has been transcribed, and it would serve no useful purpose to report the same in detail, but in summary:

(1) *James W. Blair,* a Government engineer, concluded, as a result of a physical survey of the river for the United States in 1930, that the river was susceptible of improvement for navigation, but he added:

> "Well, I think that it could have been made a navigable stream; but with modern-day developments, that it would not have been economically justified." (Record, W-2300, page 268)

Blair testified that improvements would have been necessary to render the river navigable, but, in making the survey, he made no specific study of the feasibility of a canal and locks around Portman Shoals.

(2) *S. A. Minter,* also a Government engineer, concurred in Blair's conclusions that the development of the Seneca-Keowee for navigation would not have been economically justifiable. (Record, W-2300, page 293)

While the costs of canals and locks surmounting the Clarks Hill and Hartwell dams would have been tremendous, the economy of the area would not have justified the improvements required had the dams not existed.

(3) *J. N. Stribling,* an engineer for Duke Power Company, made a detailed study of the shoals in the entire Seneca-Keowee River in 1942; this study showed:

(a) That there were 86 shoals in the 54 miles of the river from Toxaway-Whitewater to the Seneca-Tugaloo juncture;

(b) Above Shoal 65 (at Little River) the numerous shoals were shallow, and there was no defined channel;

(c) Between Little River and Eighteen Mile Creek (just above Portman Shoals), the river was quiet for a nine-mile stretch, in which there were only three shoals;

(d) In the area between Little River and the formation of the Savannah, there was no well-defined channel in the 21 observable shoals;

(e) In the three-mile area of the Portman Shoals, the river fell a total of 52 feet; these shoals accounted for 52 feet of the 272 feet fall in 54 miles;

(f) The survey revealed no evidence of sluicing in the river in any area.

(4) *William States Lee, III,* also a Duke engineer, testified that the sluicing of the Seneca-Keowee Shoals would have created navigational problems caused by the accelerated velocity of the water which the witness estimated at nine miles an hour. (Record, W-2300, page 481)

As an alternative, the winding sluices (for upstream travel) could not be constructed in most shoals because the width of the river would not allow such sluicing. (Record, W-2300, page 484)

The stream flow on the Seneca was 1,997 cubic feet per second at the Anderson measuring station, a little less at Portman Shoals; the Keowee at Newry (Little River) had a flow of 1,127 cubic feet. The New River, on the other hand, had a flow of 3,910 cubic feet per second at Eggleston, Virginia, downstream from Radford.

(5) *Two FPC decisions* invoking the navigability of the stream were introduced in evidence by the United States.

These Federal Power Commission decisions related to the navigability of the Seneca-Keowee River. (Plaintiff's Exhibits 22 and 23, Record, W-2300, pages 529-531) These were *ex parte* proceedings which are not binding on this Court even though the FPC found that the Seneca-Keowee was a navigable stream; these documents were evidentiary in nature and have been considered in the overall determination as to navigability.

The first order was issued in June, 1943, and required Duke to show cause why it should not apply for an FPC license to operate the Portman Shoals facility. The second order was issued in connection with the intention of Blue Ridge Electric Cooperative to construct a hydroelectric power development on Keowee River. In both instances, FPC found the river to be "navigable waters of the United States," but there was no contest on the findings in either case.

This testimony, including the FPC findings, indicates that this river could have been made navigable—i.e., that it was feasible form an engineering viewpoint.

e. *Finding and Conclusions as to Navigability of the Seneca-Keowee River*

The engineering data confirms that which the historical sources had already indicated: that there was at no period a sufficient flow of useful commerce on the Seneca-Keowee River to render it a navigable stream in a federal sense.

For the ultimate question is not whether there was an occasional boat on the river but whether or not at any time there was navigation on the river which was sufficient to make the river a useful arm of commerce. An occasional or sporadic use of no economic consequence would not be sufficient for this purpose, and the use of an isolated stretch of the river, disconnected with any river commerce to tide-

water or any other interstate use, would not be sufficient to make the nonnavigable stretches of the river navigable in fact from a federal viewpoint.

Certain documents as to the status of the Seneca River under Federal Power Commission proceedings were introduced in evidence; the documents included findings by the Commission that the Seneca was a navigable stream. Since the reports of these proceedings contain no basis for the finding as to navigability, we fail to see that they are of any value to us in arriving at value; certainly they are not a binding finding as to navigability since a judicial proceeding was not involved.

It is our conclusion therefore that the Seneca-Keowee River was not in fact navigable and that such attempts as there were to make the river navigable never bore fruit.

Had the river been used as a useful stream of commerce for any reasonable period of time at any time in it past, the river would then have beome navigable in fact and the subsequent lack of use would not have changed its status, but there was not, in our opinion, ever a sufficient use of this river to render it navigable in fact. The economy of the area did not justify such a development in view of the high cost of erecting barriers or canals which would make the river suitable for such commerce.

This conclusion is compatible not only with the testimony of Dr. Hollis but also with the conclusions reached by Dr. Williamson where he said that he did not think that the economic development of the area justified the development of the Seneca-Keowee rivers for navigation purposes. Certainly the period from 1800 to 1830, when there were no railroads or possibility of railroads into the area, was the time when such a development would have taken place if it had been economically feasible. The roads at the time were in poor condition and the settlers of this interior part of the state were looking for alternate means of transportation but the Seneca-Keowee did not and could not provide the answer under the existing economic conditions.

Development of interna. improvements in the first quarter of the nineteenth century reflected the needs of an expanding young nation; this was the period in which the Mohawk canal became the transportation artery connecting New York with the west. The Potomac canal provided a link with the interior, and in South Carolina the Santee canal was built with great imagination and at high cost to make the interior of the state accessible to Charleston.

So too the Savannah River became a logical means of access to a two-state area; the meandering course of the stream as far as Augusta made this river a developed navigable stream; above the fall line river transportation was also well developed for a distance of 60 miles. Despite some shoals and rapids, there was also some river transportation of a sporadic nature as far north as Andersonville, located where confluence of the Seneca and Tugaloo rivers formed the Savannah.

But above the area in which the Savannah is formed on the Seneca-Keowee, the river was naturally nonnavigable, and the improvements which were attempted did not change that status.

. . . . . .

The impact of that factual finding will be discussed in the light of certain cases which deal with situations similar to the Portman Shoals hydroelectric plant.

For if the river on which this hydroelectric plant is located is nonnavigable, the question then becomes whether or not the government would have to pay compensation for this facility and its transmission lines.

A similar question was considered by the Supreme Court in *United States* v. *Willow River Power Company*, 324 U.S. 499, 89 L.Ed. 1101 (1945). In that case a power company had built a dam on the Willow River, a nonnavigable stream near the point at which that river emptied into the St. Croix River, a navigable stream. The dam was actually on the

bank of the St. Croix River and the powerhouse was located on land above the ordinary high water of the St. Croix. In accordance with a congressional plan for the improvement of the St. Croix, the river level was raised so as to impair the flow of water from the power head created by the Willow River dam.

The Supreme Court determined that the question to be answered was whether or not Willow River Power Company had a "property right" in its dam and head of water. The Court said that this question would depend on whether or not the company had water rights in the stream, on whether or not the stream was navigable, and on whether or not there was a conflict between private riparian interest and the public interest in navigation.

The property right asserted was described by the Supreme Court in *United States* v. *Cress*, 343 U.S. 316, 330, 61 L.Ed. 746, 754, 37 S.Ct. 380, as "the right to have the water flow away from mill dam unobstructed, except as in the course of nature." The Court held in the *Cress* case that this right was "an inseparable part" of land.

In the *Willow River Power Company* case, the Court recognized the riparian rights of owners of land on nonnavigable streams. In the *Cress* case, for example, the government had built a dam in the navigable Kentucky River which backed up the water in a nonnavigable tributary to a point one foot below the crest of mill dam. In that case, the Court held that the rights of the government at this location were no greater than those of any other riparian owner and therefore not paramount to the rights of Cress.

The Court distinguished the *Cress* case on the theory that in that case the navigable interest was not a dominant one at the point at which the property was damaged while, in the Willow River case, the dominance of the navigation interest at the St. Croix was, according to the Court, clear. In the *Willow River* case, the power company was held to be a riparian owner on a navigable stream. The Court compared the Willow River dam to the one involved in *United*

States v. *Chandler-Dunbar Water Power Company*, 229 U.S. 53, 57 L.Ed. 1063, 33 S.Ct. 667. There, the power company owned riparian lands and the Court held that the landowner has no riparian rights as against projects of the United States in direct aid of navigation.

Another aspect of this question was involved in *United States* v. *Grand River Dam*, 363 U.S. 294, 4 L.Ed.2d, 1187, 80 S.Ct. 1134, decided in 1960. That case involved a nonnavigable tributary of the navigable Arkansas River. Congress had in 1941 enacted an Act "for the benefit of navigation and the control of destructive waters" to protect the "navigable capacity" of the Arkansas River. The Grand River Dam authority, a creature of the Oklahoma Legislature, had sought compensation for the taking of water power rights and its franchise to develop electrical power and energy at the site of a federal project. As the Court said, the United States did not appropriate any business, contract, land, or property of the authority and the frustration of the respondent's plans and expectations was not a proper basis for compensation.

This case is almost "on all fours" with the *Cress* case, and, having found that the river was nonnavigable in a federal sense at this point, we find that Duke is entitled to compensation for the taking of its hydroelectric facility.

III. Valuation

A: *Land: The Value of Duke's Lands Taken*

Because the value of the land is only a fractional part of the award sought by Duke for its dam and hydroelectric power plant does not mean that this question is any less important. Generally findings of value for lands are not too difficult of solution.

In this case, the testimony as to the dollar value of the lands taken is not too far apart: E. H. Agnew set these values at $50,370 for the 503.7 acres; he used an average

per-acre value of $100. The other appraiser for the landowner, Charles S. Major, valued these lands at $45,333 on a $95-an-acre basis. Both of these witnesses valued the land for "timber growth."

Neither of these witnesses ascribed any severance damages to the taking in this case, and neither of them suggested any industrial or residential values with reference to the lands taken or the lands remaining.

The United States presented as its appraiser of the 503.7 acres taken Clark D. Honnold, District Chief Appraiser for the Corps of Engineers with almost a quarter of a century of experience in appraisals. Honnold made a "before" and "after" appraisal of the entire Duke tract of some 954.7 acres. These pertinent acreages and values are:

	Acreage	Value
Tract before taking	954.7	$113,728.00
Tract after taking	317.2	$ 93,210.00
	637.5	$ 20,518.00
Less: River bed	106.4	No value
Lake area	27.4	hydroelectric reservoir
Area taken	503.7	$ 20,518.00

Honnold had made an appraisal in 1959 based on straight timberland values without any reference to industrial sites or subdivision of the remaining lands. The appraisal presented was formulated on the day prior to the trial; in this (1963) appraisal, Honnold ascribed an "average" value of $300 an acre to 93 acres which he characterized as parts of industrial sites and which are in the "take" area and $30 an acre to the other lands taken. If the exact values ($400 for 14 acres and $250 for 79 acres) are computed, the value of the 93 acres was $25,350; on the average $300 basis their value was $27,900.

If the $30-per-acre value is applied to the other acreage taken (410.7 acres), a value between $37,500 and $39,000 is arrived at for the lands in the "take" area. This compares with a value of around $19,000 for the 1959 timberland

appraisal; the witness did not have this appraisal with him so that the exact figures are not available. (Record, page 178)

But, in its final appraisal of value, the Government has used a different measure of damages: the entire tract—including all lands in the "take" except those in the reservoir, river and dam—was worth $113,728 before the taking. The major item in this figure was 330 acres in two industrial sites which Honnold valued at $99,000; the remaining 490.9 acres in the tract (exclusive of the river and lake) were valued at $30 an acre or $14,727—with a figure of $1 for the lake-river acreage, making up the total of $113,728. The 330 acres in industrial sites included the 93 acres in the area taken.

The industrial site factor was discarded for another highest and best use in the "after" appraisal: a residential subdivision with lakefront lots. The same relative values which had been ascribed for industrial sites ($400 an acre for 66 acres and $250 an acre for 171 acres) were assigned to the former industrial sites which are now considered to be residential lakefront lots. But the status of 80.2 acres which in the "before" appraisal was classified as timberlands has been changed to residential subdivision worth $300 an acre, or $24,060 (rather than $2,406); this represents an increase in value of $21,654.

A great many appraisals may seem to involve semantics in the shifting of values. This Commission has a high regard for the professional abilities and integrity of Mr. Honnold, but we are forced to reject his findings as to residential subdivision value for the remaining acreage.

The principle that the condemning authority is entitled to any enhancement in value to the remaining properties of a landowner is well settled. 33 U.S.C. 595; *United States v. 2477.79 Acres of Land in Bell County, Texas*, C.C.A. 5, 1958, 259 F.2d 28. But in this case only one sale in support of residential values was cited, and that was for a sale of a tract having lake and highway frontage.

While, as a general principle, the creation of a lake may be expected to enhance in value the properties fronting directly on the water, the enhancement factor would not apply to portions of a tract behind and away from the lake front. These "back" properties may have increased to some extent in value, but there was no showing here that the market had stabilized to such a degree as to be a reliable indicium of value. This is a tremendous lake, and the increase in values may be years in the making.

The values based on enhancement were too speculative to be of probative value; we would have been inclined to have given much greater weight to Honnold's original (1959) appraisal which was not presented for our consideration.

No values for industrial sites were found in this 1959 appraisal by Mr. Honnold; such values were only injected when the subdivision factor was brought into the picture. Absent the industrial site factor in the "before" appraisal, Duke would have "owed" the United States about $75,000 for enhancement of its remaining properties. We assume that the Government did not want to take the twofold position (1) that Duke's powerhouse and dam were worth nothing and (2) that Duke should be pleased with the taking of its properties by virtue of a $75,000 enhancement in value for the 317.2 acres left.

While none of the witnesses considered the industrial site factor in their original appraisals, this is not a factor which can be entirely overlooked; it was an element which gave some "override" value to all of the lands taken.

We have concluded that a value of $75 an acre was the fair market value of the 503.7 acres taken as of December 9, 1960; we therefore recommend an award to Duke Power Company of $37,775 for the taking of its lands which had no connection with the powerhouse, dam or reservoir. None of this value is ascribed to hydroelectric factors, but this is the figure which will compensate Duke adequately for the taking of these lands.

III b. *Hydroelectric Facilities*

(1) The Dam, Powerhouse and Substation at Portman Shoals

Ascertainment of damages for the taking of a hydroelectric power plant is no easy problem in evaluation. Lands, houses, commercial buildings and other business structures sell regularly in the real estate market; but sales are the exception rather than the rule for power plants.

Thus while the rule of "market value" will generally be adhered to in establishing just compensation in condemnation proceedings, a different approach must be used in setting values on public highways, streets or utilities; in these instances the "substitute facility" required or needed to perform the function involved will usually be substituted. *U.S.* v. *51.8 Acres of Land, etc. in Town of Hempstead, Nassau County, N.Y.*, 151 F. Supp. 631, affirmed *U.S.* v. *Jones Beach State Parkway Authority*, 255 F.2d 329, certiorari denied 79 S.Ct. 55, 358 U.S. 832, 3 L.Ed. 2d 71.

For example, it would have been manifestly impossible to ascertain a market value for the Anderson County roads flooded by the Hartwell project, or the market value of the State roads inundated in this same area. The substitute facility approach would have to be applied in such situations. So also damages caused by the taking of electrical transmission lines can only be determined by this approach.

There are basically four approaches to value from an appraisal viewpoint:

1. Fair Market Value—the approach most generally used, with comparable sales as the yardstick;

2. Income Return or Earnings—a good approach for property which has been developed to its production potential, using the capitalized value of the income as the measure of damages.

3. Replacement Cost Less Depreciation—a proper approach for a building or facility which is not economically obsolete, with the value of the remaining life as the criterion of damages, and

4. The Substitute Facility—an appropriate approach where the contribution of the particular facility is the best indicium of value.

Two of the witnesses (Safford and Wise) alluded to the market approach, but they both rejected the few sales found as not being comparable; utility plants as such do not generally sell in the market place.

The two witnesses for Duke (Lee and Wise) used all three methods in arriving at a "judgment of value" for the plant, but Safford for the Government used only the income approach. Safford's method had in it, however, overtones of the substitute facility approach.

A summary of the values arrived at for the hydroelectric plant were as follows:

Witness	Income or Earnings	Replacement less depreciation	Substitute Facility
Lee (Duke)	$789,000	$953,000	$682,000
Wise (Duke)	$567,000	$662,000	$304,000 to $384,000
Safford (U.S.)	$362,000*		

* Includes value of the transmission lines (Record, W-2300, p. 224).

Both of the witnesses for Duke relied for their assertions of value on replacement cost less depreciation, and they did not include the value of the transmission facilities in the hydroelectric plant value. Stafford rejected this approach because of the age of the plant; he estimated the remaising value of the facility at 15 years.

All three appraisers arrived at figures "within the same ball park" as *annual net income* from this hydroelectric facility: Wise, $47,350; Lee, $51,637; and Safford, $53,200. The difference in results came in determining the economic life of the facility and the capitalization rate. These answers in summary, were:

	Annual Income	Economic Life (years)	Capitalization Rate	Value as Capitalized
Lee (Duke)	$51,637	(30)#	6.5%	$789,000
Wise (Duke)	$47,350	20	5.5%	$567,000
Safford (U.S.)	$53,200	15	12%	$362,000

\# Depreciation already taken before computation of annuity which is done on "in-perpetuity" basis.

Safford, an engineer with Charles T. Main of Boston, used capitalization of net income in arriving at his value for the facility. The estimated annual *gross* income was, according to Safford, made up of these three elements: (1) the value of the energy, (2) the firm capacity of the plant based on minimum stream flow, and (3) the capacity available for power factor correction. The figures are:

	Per Year Value
(1) Gross Annual Income (1937–58 incl.) 27,000,000 kilowatt hours of energy at 3.2 mills per kilowatt hour	$86,600
(2) Firm Capacity: 8 hour peak: 900 kilowatts valued at $21.80 per kilowatt ($150.00 per kilowatt x 14.5% for one year)	$19,600
(3) Power Factor Correction: 4,690 kilowatt capacitors Substitute capacitors at $12. x 14.5%=$1.74 x 4,690=	$ 8,200
Annual estimated gross income	$114,400
Less: Annual Costs:	
(1) Operation and maintenance	$54,100
(2) Taxes	7,100
Net Annual Income	$53,200

Safford estimated the remaining useful life of the plant at 15 years; income of $53,200 per year would be produced by an equivalent annuity (at 12% compound interest) of $362,000.

The underlined "judgment figures" have been criticized by Duke. The increase of the firm capacity by 1,000 kilowatts, for example, would make the method he used increase the annual net income by $21,800, but there would be corresponding decrease in the power factor correction of $1,740, for a net income increase of $20,060. Any decrease in the annual operating and maintenance costs would of course increase the net income proportionately.

Safford in his testimony attempted to isolate this facility from an integrated electrical power system in arriving at value; such an approach is not realistic or fair to Duke. For the real economic question insofar as Duke is concerned is: what is the cost of a substitute facility required to perform the function of the plant taken?

In considering that question, the cost of a similar facility with the same annual output or contribution in power would

not be a fair measure of compensation where the facility condemned has a limited economic life as compared with the substituted facility. The award must be reduced by this factor of the economic life of the Portman Dam. Obviously no power company would build a dam and powerhouse of the type built by Duke's predecessor more than 60 years ago.

By the substitute facility approach, Wise came up with figures in a $302,000-$384,000 range, but, because these figures were based on a steam plant with increased operating costs (coal and maintenance), he rejected this approach.

The cost of production facilities for a single kilowatt of capacity varied from a capital figure of $109 (Lee) to $150 (Safford). If the facility had a capacity of 6,000 kilowatts, this would indicate a value between $600,000 and $900,000, but this gives the facility a longer life than the Portman Shoals facility had and a power rating higher than its average capacity which must be based on annual output.

Portman Shoals produced for Duke, according to Safford, an average of 27,000,000 kilowatt hours annually; this meant a daily average of about 74,000 kilowatt hour, or a little more than 3,000 kilowatts per average hour.

If the plant had operated on a 24-hour basis, 365 days a year at a capacity of 6,000 kilowatts, the total power produced would have been 52,560,000 kilowatt hours, or about two times the average annual production; on a full capacity basis the maximum daily production at a rating of 6,000 kilowatts would have been 144,000 kilowatt hours.

The maximum capacity of the Portman Shoals plant was 6,990 kilowatts, but, according to Duke's witness Wise, an 85 per cent power factor should be applied on the basis of the Portman Shoals records, giving a name plate rating of approximately 6,000 kilowatts; on the average, because of variations in the flow of the river, the plant could be expected to produce between 4,000 and 4,500 kilowatts. (Record, W-2300, pages 65 and 90).

Lee, Duke's engineer, said that the "installed capacity" of the Portman Shoals plant was 5,590 kilowatts; on a pro-

duction of 27,000,000 kilowatts annually this meant that the plant operated at about 55 per cent of maximum capacity. (Record, W-2300, page 520)

Because of variations in load demand in the systems and the lack of an adequate reservoir at Portman Shoals, it is obvious that this plant could not have been operated at anything approaching maximum output on a sustained basis; such a hydroelectric facility has to be a part of a system integrated with steam plants and other hydroelectric plants with storage reservoirs in order to provide dependable electrical energy. It was a functioning part of the Duke system, but dependent upon that system for economic usefulness.

Documents were introduced by the landowner as to the value placed on the Portman facilities by the Army Engineers in developing cost estimates for the project; this figure was $1,750,000 for land and damages in one document, and in another document the propriety of making a monetary estimate of the value of Duke's holdings was questioned on the grounds the development of the dam on a navigable stream might raise a question as to payment to Duke. (Plaintiff's Exhibits G & H) The United States objected on the grounds of privilege and relevance; we held the memoranda irrelevant since the value set was not within the limits of value ascribed to the project by all witnesses who testified before us. (Record, W-2300, page 161)

Our analysis of the testimony convinces us that the Portman Shoals hydroelectric facility was worth $500,000 to the Duke system. We do not think that the replacement cost less depreciation is a realistic approach to the value of a plant which was already obsolete.

At the same time we think that Safford's figure of $362,000 for all damages (including the transmission lines) is too conservative for these reasons:

(1) The 15-year economic life assigned to the facility;
(2) The 12% capitalization rate, and
(3) The low firm capacity assigned to the facility in his analysis.

By doubling the firm capacity from 900 kilowatts to 1,800 kilowatts, the net annual income would have been increased under Safford's method from $53,200 to $72,800, a figure substantially higher than the income assigned to the plant by Lee or Wise. If the economic life is extended to 20 years and the capitalization rate is decreased to 9%, a substantially different (higher) figure will result.

The basic figures used by Safford in arriving at net annual income appear sound, but we do not agree with his *judgment* figures in arriving at damages.

We have therefore considered all of the testimony—including the judgment of the other witnesses as to the facility's economic life and the applicable capitalization rate—in arriving at this value for the Portman Shoals facility.

III b.

(2) The Transmission Lines

The transmission lines which were used by Duke to carry the power created by the Portman Shoals facility were also a part of Duke's distribution system between Anderson and Townville; that the United States is obligated to pay Duke for relocation of its Townville distribution line is admitted, and we are not concerned with that cost.

By stipulation the parties agreed that one fourth of the value of the line from Portman Shoals to Anderson is allocable to the relocated Anderson-Townville distribution line. This means that only three fourths of the value of the transmission line from Portman to Anderson is involved in this case, and that value has the same legal status as the dam and the hydroelectric plant.

Having concluded that Seneca River was nonnavigable at Portman Shoals and that Duke was therefore entitled to compensation for its hydroelectric facilities, we must assign a value for this part of these transmission lines which are as important to hydroelectric power plant as the dam, generators, or other parts of the power plant. These lines had salvage value only after December 9, 1960, when the effec-

tive use of the Portman Shoals facility was ended by the rising waters.

Safford, appraiser for the United States, assigned no separate value for these transmission lines which had been included in the value of $362,000 for the entire facility. This approach was somewhat inherent in his method of arriving at value: the income approach.

The method used by the landowner's two principal witnesses (Wise and Lee) as to hydroelectric value was the replacement cost less depreciation. This method excludes the transmission lines since only the elements at the damsite were considered in this type of appraisal.

These transmission lines can be appraised with a greater degree of accuracy than the other parts of the hydroelectric facility. Accurate measurements and counts of poles, conductors and insulators were obtained by Sirrine; all of this equipment was depreciated after an investigation of physical conditions, maintenance and replacements, anud salvage value of materials was deducted.

Mr. Wise arrived at the value of the transmission lines as follows: (Record, W-2300, pages 102-104)

1. 9.6 miles of 16-conductor transmission lines:		
Replacement cost	$134,700	
Depreciated value: (90%)		$121,300
2. 280 two-pole structures:		
Replacement cost	$ 34,000	
Depreciated value: (60%)		$ 20,400
	$168,700	$141,700
3. Less salvage value of copper and aluminum		51,456
		$ 90,244
4. Plus cost of removal of wire		18,734
		$108,978
5. 75% allocable to lines under stipulated agreement		$ 82,000
6. 75% of value of Tribble Street substation in Anderson		$ 6,000
Total value of transmission lines by replacement cost less depreciation		$ 88,000

We have considered these lines as a part of the hydroelectric facility at Portman Shoals; they were necessary to make the power a part of the Duke system. The replacement cost less depreciation method was more logical for this part of the facility than for the powerhouse and dam which were 60 years old.

In arriving at the value of the facility to Duke's integrated power system, the cost of the lines as a part of an operating and functioning system has been considered in the overall award for the Portman Shoals hydroelectric facility.

c. *Summation on Value*

Thus we have concluded that Duke was damaged in the sum of $537,775 by the taking of its properties at Portman Shoals; of this sum $37,775 is allocable to the lands taken (503.7 acres) apart from the hydroelectric plant and reservoir.

The remainder—$500,000—represents the damages which Duke suffered by the taking of its hydroelectric facilities at and connected with Portman Shoals. This figure includes the dam and reservoir, created before 1900, and we have also considered the fact that this facility is a run-of-the-stream plant because of the silting which has taken place in the reservoir.

While Duke's witnesses relied primarily on replacement costs of the various component parts of the facility, *less depreciation,* we do not think that this method gives an accurate accounting of Duke's damages. For as Duke's witness Wise remarked: "Portman Shoals was an old plant, having depreciated." (Record, W-2300, p. 68)

In our opinion Duke's entire hydroelectric facility at Portman Shoals—including the 75% of the transmission lines to Anderson—was worth to the system $500,000; from that figure we must subtract the value of the materials salvaged from Portman Shoals; this figure was stipulated to be $9,627, so that including the transmission lines, Duke has been damaged in the sum of $490,373 by the taking of

the hydroelectric facilities at and directly connected with its Portman Shoals dam and power plant.

In arriving at this figure, we have considered all of the testimony in value as presented by Duke's chief engineer and an engineer from J. E. Sirrine Company (for Duke); their task (and ours) was made the more difficult by the fact that Duke kept no separate accounting records for the Portman Shoals facility. It was impossible to determine from these records what profit (or loss) occurred in any year from the Portman Shoals operation.

The government's witness, Safford, an engineer from an internationally known Boston engineering firm, presented a cogent and well-analyzed appraisal based on the income approach, and we have accorded his approach substantial weight in arriving at our conclusion as to value of this facility.

If the Portman Shoals facility did contribute $50,000 a year in net income to Duke—a figure on which the three appraisal witnesses are in virtual agreement—two questions remain:

1. How much longer could Duke have expected to receive this net amount from this facility?

2. What is a proper rate to consider in fixing capitalization?

The rate of interest on the capital will greatly change the amount of principal necessary. Using a $50,000 income, the results are as follows over a 15-year period:

Percentage	Factor	Principal Amount
12%	6.8109	$340,545
9%	8.0607	$403,035
6%	9.7122	$485,610

If the period is increased to 20 years on the same income basis ($50,000 per year) then the results are as follows:

Percentage	Factor	Principal Amount
12%	7.4694	$373,470
9%	9.1285	$456,425
6%	11.4699	$573,495

Thus it can be seen that with the same annual income the principal amount required to produce that income will vary greatly depending upon the economic life of the facility producing the income and the interest rate used to compute the capital required to produce the same income.

Safford selected a high rate (12%) because he considered a "safe investment" rate of 6%, operating and maintenance costs of the plant, and general overhead for management. (Record, W-2300, page 238) But the operation and maintenance costs had already been considered in arriving at the net annual income figure of $53,200, and he also suggested that income taxes should be considered. These taxes are a factor but they will be charged on the interest portion of the income from the investment of the sum awarded, and the remainder takes the place of Duke's capital investment.

As the hydroelectric witnesses have all indicated, judgment factors must enter into these computations, and our recommendation of an award involves judgment factors which must of course be based on the evidence in the record.

The amount which will be required to compensate Duke for the taking of its hydroelectric facility—including damages rendered by taking 75% of the transmission lines to Anderson and the Tribble Street substation—is the sum of $500,000.

This award will repay Duke for the hydroelectric plant as it existed on December 9, 1960; this award is not based on the value of the dam site as such or any values which would be involved in the construction of a larger dam and reservoir at this point. The figure reflects the present worth of what Duke had at Portman Shoals on the date of taking.

IV. Summary

a. *Findings of Facts*

General:

1. That Duke Power Company, a public utility, was the owner of a tract of 954.7 acres (which included 106.4 acres within the bed of the Seneca River) located about eight miles above the point at which the Seneca and Tugaloo rivers unite to form Savannah River.

2. That in this tract were located the 52-foot dam and powerhouse at the site known as Portman Shoals; that this hydroelectric facility had been maintained by Duke and its predecessors since the erection of the dam in 1898.

3. That these lands and facilities were taken from Duke by the United States on December 9, 1960.

The Navigable Status of the Seneca-Keowee River

4. That the Seneca-Keowee River (on which Duke's tract and hydroelectric facility were located) is a tributary of the Savannah River which is a navigable stream for its entire course of 297 miles.

5. That, prior to 1800, there had been no attempts at navigation on the Seneca-Keowee, the population of the area being small at that time.

6. That, during the period from 1800 to 1830 when tremendous efforts were being made to improve internal transportation by the federal government and the respective states, sporadic efforts in the form of opening sluices through shoals were made on the Seneca-Keowee by the Bureau of Public Works of the State of South Carolina.

7. That extensive plans were made for the development of the Seneca-Keowee River, and an appropriation of $6,000 was spent in the development of sluices in the various shoals in and near Portman Shoals in the years 1824 and 1825.

8. That, despite these expenditures and efforts, the Seneca-Keowee did not become a useful artery of commerce,

and the trips made by boats on the river were largely exploratory or experimental in nature.

9. That, because of the lack of development of useful commerce, the project was abandoned since the commercial needs of the area did not warrant the expenditure for an elaborate system of canals and locks needed to negotiate the 52-foot fall in Portman Shoals.

10. That a later boating project (1889-96) for carrying railroad ties from Little River to Cherry's Crossing in the Seneca-Keowee did not connect with any downstream commerce and was purely intrastate in character.

11. That the topographical, engineering and hydraulic data on the Seneca-Keowee River indicates that the river could be made navigable, but the falls in the shoals and the general topography would require expenditures far in excess of commercial uses which could be made of such navigation.

12. That the Seneca-Keowee River is not now, and was never navigable in fact and is a nonnavigable stream at the point at which Duke's Portman Shoals dam and powerhouse were located.

The Lands Taken:

13. That, in addition to the dam and reservoir area (133.8 acres, including 27.4 acres outside of the river bed), the lands taken from Duke consisted of 503.7 acres.

14. That these acres were in timberlands at the time of taking, consisting largely of lands suitable only for timber growth, but a portion of the lands on the east bank (93 acres) had some potential as industrial sites.

15. That, although the remaining acres may have been enhanced to some degree by the advent of Hartwell Lake, the impact of this development was too speculative and conjectural for use in determining overall damages to Duke.

16. That the fair market value of the 503.7 acres in the tract taken was the sum of $37,775, on a basis of $75 per acre.

The Dam, Powerhouse and Transmission Lines

17. That the Portman Shoals facility consisted of a 52-foot dam, a powerhouse with substation and transmission lines for carrying the electric power to Anderson to become a part of Duke's grid power system.

18. That the Portman Shoals facility, built in 1898, had an installed capacity of 5,590 kilowatts, but, because it had become a flow-of-the-stream facility due to silting, it could not be depended upon for that capacity on a sustained basis.

19. That the facility contributed 27,000,000 kilowatt hours to the Duke system annually, so that the plant operated at about 55% of its capacity.

20. That the Portman Shoals facility had an annual average net income of $50,000, and the remaining useful life of the plant was 20 years.

21. That the capitalization rate used in arriving at damages should be higher than 6% because of the risks involved in operating a power plant of this type and age.

22. That Duke has been damaged by the taking of its Portman Shoals facility in the sum of $500,000, from which must be subtracted the value of equipment salvaged in the sum of $9,627—making the net damages $490,373.

Summary on Damages:

23. That Duke Power Company has been damaged in the total sum of $528,128 as a result of the taking of its lands and Portman Shoals hydroelectric facilities by the United States.

b. *Conclusions of Law*

General:

1. That the United States had the right to condemn these lands in the exercise of its power of eminent domain.

2. That the value of land taken and all other damages to a landowner in a condemnation proceeding must be determined as of the date of the taking by the United States.

Navigability in a Federal Sense:

3. That, in determining whether or not a river is navigable in a federal sense, the deciding factor is whether or not the river is now or was in the past a channel for useful commerce in interstate or foreign commerce.

4. That a river which is or was at any time navigable in fact is navigable in law, and the subsequent disuse or abandonment of navigation on the river would not change its navigable status.

5. That the findings of the Federal Power Commission as to the navigability of a river are not determinative of this issue in a judical proceeding in the federal courts.

6. That mere plans or projected uses of a river for navigation do not make the river navigable if the proposals did not materialize in useful commerce.

7. That, if the use of a stream for navigation is exceptional or occasional, the stream would not be thereby rendered navigable, and purely local use of limited scope and not connected with the interstate or foreign commerce would not render a stream navigable.

8. That the fact that a series of shoals in a river could have been overcome by a system of canals and locks would not render the river navigable if the economy and predicted commerce did not render the project feasible.

9. That the entire commercial history of a river must be considered in determining the navigability of a river.

10. That in determining historical facts such as the navigable status of a river in the past, written historical accounts, public reports and records, statutes, contemporary letters and reports, and contemporary newspaper articles and the judgment and conclusions of recognized historians can be used as the basis for historical findings.

11. That family traditions or stories in regard to a historical fact such as navigation will be rejected as a basis for historical findings since such traditions or stories are reliable only for family matters such as births, deaths and relationships.

12. That navigation is a question of fact which must be determined in the light of the particular stream's commercial history, the economic status of the area, its topography and the various engineering factors involved.

The Value of Lands

13. That, in determining the value of lands in a condemnation proceeding, the highest and best use of the lands will be considered.

14. That different uses can be assigned for different areas of a tract, but there must be no duplication of values for the same areas.

15. That the fair market value of a tract of land can be established by sales of similar or comparable properties in the same general area within a reasonable time of the date of taking.

16. That, in the absence of comparable sales, other methods of appraisal can be used in establishing fair market value.

17. That enhancement in value due to changes resulting from the condemnation is a proper consideration in determining overall damages to a landowner, but values based on an unstabilized and speculative market are not proper in a condemnation proceeding and will not be considered.

Valuing a Hydroelectric Facility

18. That a utility which owned and operated a dam, powerhouse and transmission lines in a nonnavigable stream is entitled to compensation for the taking of the same.

19. That the fair market value of a hydroelectric facility can generally not be established by the market value approach since few utility sales take place in the real estate markets.

20. The four recognized methods of appraisal are:

a. Fair market value;
b. Income return or earnings;

c. Replacement cost less depreciation, and,
d. Cost of a substitute facility.

21. That the substitute facility approach is generally employed in valuing such items as highways, streets, transmission lines, or a public utility, but alternate methods will be used if the facility is not adaptable to the substitute facility approach to value.

22. That replacement cost less depreciation is a proper method of ascertaining value of a productive facility, but this method is of doubtful value where the facility has been fully depreciated and is in large measure economically obsolete.

23. That income return is a proper method of arriving at value for a hydroelectric plant; the damages are determined by capitalizing the income at a proper capitalization return rate over the remaining economic life of the facility.

24. That in arriving at damages caused by the taking of a public utility's hydroelectric power plant, the contribution which the plant made to the entire power system of the utility can be considered in arriving at a value for the plant.

25. That if the income approach is used for finding damages caused by the taking of a utility's hydroelectric plant, the entire plant—including substations and transmission lines—must be considered as contributing to the overall value, and no separate values can be assigned for component parts.

Award:

26. That the utility should be awarded compensation as set out in the Findings of Fact.

27. That the owner of this land and hydroelectric facility is entitled to interest at the rate of six per cent (6%) per annum on the amount of the award in excess of the deposit in court.

c. *Recommendation*

That the Duke Power Company be awarded the sum of Five Hundred and Twenty-eight Thousand, One Hundred and Fifty-eight ($528,158.00) Dollars, with interest at 6% on the award in excess of the deposit made in court from December 9, 1960.

Respectfully submitted,

/s/ AUGUSTUS T. GRAYDON,
Chairman.

GEORGE P. CALLISON,
/s/ J. DAVIS KERR,
Commissioners.

Dec. 28, 1963.

CONCURRENCE

I concur in the above findings, conclusions and recommendations, but on the issue of navigability of the Seneca-Keowee River and this general issue, I would like to add this:

From the historical records, it is apparent that there was river navigation in Piedmont, South Carolina in the period from 1800 to 1850 and that this navigation was commensurate with the economy of the area. While that commerce may seem modest and unimportant as compared with modern standards of river commerce, it was significant in those days.

This navigation was in my opinion sufficient to create a navigable status for many of the rivers in the Piedmont, but the obstacles in the Seneca-Keowee River, particularly in the area of Portman Shoals, were sufficient to prevent the development of useful commerce in the federal sense on this river during this period. There was not sufficient river traffic to warrant the construction of canals and locks, and the sluices attempted on the river through Portman Shoals did not make this river navigable in this area for useful commerce.

For these reasons I concur in the holding that the Seneca-Keowee was nonnavigable in a federal sense even though portions of the river had been used for useful *intrastate* commerce along certain stretches of the river during this period and thereafter. I do not think that the navigation which did exist on this river was sufficient in economic scope or in "river-mile" extent to give the United States a paramount servitude in the Seneca-Keowee River. I agree that the river was nonnavigable.

/s/ GEORGE P. CALLISON,
Commissioner.

Greenwood, South Carolina, Dec. 27, 1963.